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The Palermo *Swift*-BAT hard X-ray catalogue

III. Results after 54 months of sky survey

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ABSTRACT

Aims. We present the Second Palermo *Swift*-BAT hard X-ray catalogue obtained by analysing data acquired in the first 54 months of the *Swift* mission.
Methods. Using our software dedicated to the analysis of data from coded mask telescopes, we analysed the BAT survey data in three energy bands (15–30 keV, 15–70 keV, 15–150 keV), obtaining a list of 1256 detections above a significance threshold of 4.8 standard deviations. The identification of the source counterparts is pursued using two strategies: the analysis of field observations of soft X-ray instruments and cross-correlation of our catalogue with source databases.
Results. The survey covers 50% of the sky to a 15–150 keV flux limit of 1.0×10^{-11} erg cm^{-2} s^{-1} and 9.2×10^{-12} erg cm^{-2} s^{-1} for $|b| < 10^{\circ}$ and $|b| > 10^{\circ}$, respectively. The Second Palermo *Swift*-BAT hard X-ray catalogue includes 1079 (~ 86%) hard X-ray sources with an associated counterpart (26 with a double association and 2 with a triple association) and 177 BAT excesses (~ 14%) that still lack a counterpart. The distribution of the BAT sources among the different object classes consists of ~ 19% Galactic sources, ~ 57% extragalactic sources, and ~ 10% sources with a counterpart at softer energies whose nature has not yet been determined. About half of the BAT associated sources lack a counterpart in the ROSAT catalogues. This suggests that either moderate or strong absorption may be preventing their detection in the ROSAT energy band. The comparison of our BAT catalogue with the Fermi Large Area Telescope First Source Catalogue identifies 59 BAT/Fermi correspondences: 48 blazars, 3 Seyfert galaxies, 1 interacting galaxy, 3 high mass X-ray binaries, and 4 pulsars/supernova remnants. This small number of correspondences indicates that different populations make the sky shine in these two different energy bands.

Key words. X-rays: general - Catalog - Surveys

1. Introduction

The Burst Alert Telescope (BAT; Barthelmy et al. 2005) onboard the *Swift* observatory (Gehrels et al. 2004) is a coded-aperture imaging camera operating in the 15–150 keV energy range with a large field of view (1.4 steradian half coded) and a point spread function (PSF) of 17 arcmin (full width half maximum). The telescope is mainly devoted to the monitoring of a large fraction of the sky for the occurrence of gamma ray bursts (GRBs). While waiting for new GRBs, BAT continuously collects spectral and imaging information about the sky, covering a fraction of between 50% and 80% of the sky every day, providing the opportunity for a substantial gain in our knowledge of the Galactic and extragalactic sky in the hard X–ray domain and increasing the sample of objects that contribute to the luminosity in this energy range. The first results of the BAT survey were presented in Markwardt et al. (2005), Ajello et al. (2008a), Ajello et al. (2008b), Tueller et al. (2008), Tueller et al. (2010), Cusumano et al. (2010), and Maselli et al. (2010). The First Palermo *Swift*-BAT hard X-ray catalogue (Cusumano et al. 2010) contains a list of 754 hard X-ray sources with an associated counterpart detected in the first 39 months of the *Swift* mission. Among them, ~ 69% are extragalactic, ~ 27% are Galactic objects, ~ 4% are already known X-ray or γ-ray emitters whose nature has not yet been determined.

In this paper, we provide the Second Palermo *Swift*-BAT hard X-ray catalogue obtained from the analysis of the data relative to the first 54 months of the *Swift* mission and including 1256 BAT high-energy sources. The paper is organised as follows: in Sect. 2, we describe the screening and the analysis of the BAT survey data and the global survey properties; in Sect. 3, we illustrate our analysis strategy; in Sect. 4, we describe the counterpart association strategy; the 54-month catalogue and its properties are described in Sects. 5 and 6. Then, in Sect. 7 we summarise our results.

The cosmology adopted in this work assumes $H_0 = 70$ km s^{-1} Mpc^{-1}, k=0, $\Omega_m = 0.3$, and $\Lambda_0 = 0.7$. Quoted errors are at 1σ confidence level, unless otherwise specified.

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2. The BAT survey data

The results presented in this paper were obtained by analising the first 54 months of BAT survey data, from 2004 December to the end of 2009 May. The data were retrieved from the *Swift* public archive[1] in the form of detector plane histograms (DPH): three-dimensional arrays (two spatial dimensions, one spectral dimension) that collect count-rate data in 5-minute time bins for 80 energy channels.

To process the survey data, we developed and applied a code that performs screening, mosaicking, and source detection on data from coded mask instruments. This code is described in detail in Segreto et al. (2010). To screen out poor quality files from the data set, we rejected the DPHs:

- with unstable spacecraft attitude (i.e., with a significant variation in pointing coordinates).
- produced near the SAA and characterized by a count rate much higher than the average value.
- affected by inaccurate position reconstruction. This was verified through a pre-analysis procedure where the position of the sources detected in single DPHs was checked against a list of hard X-ray sources and transients (see Cusumano et al. 2010 for details).
- that were very noisy, i.e., with a standard deviation in the count rate (subtracted of both bright sources and background) significantly larger (a factor of 2) than that expected from statistics.

After the screening based on these criteria, the usable archive has a total nominal exposure time of ∼100 Ms, corresponding to ∼ 92% of the total survey exposure time during the period under investigation.

Figure 1 shows the sky coverage, defined as the fraction of the sky covered by the survey as a function of the 15–150 keV detection limiting flux, at different survey epochs starting from the beginning of the mission. The limiting flux of a given sky direction is calculated by multiplying the local image noise by a detection threshold of 4.8 standard deviations. We derived the sky fraction for two sky regions (top panel: $|b| < 10°$, bottom panel: $|b| > 10°$). The 54-month BAT survey covers 50% of the sky to a flux limit of 1.0×10^{-11} erg cm^{-2} s^{-1} and 9.2×10^{-12} erg cm^{-2} s^{-1} for $|b| < 10°$ and $|b| > 10°$, respectively. The insets in Fig. 1 show the limiting flux achieved for 50% of the sky as a function of the cumulative observing time of the screened BAT survey data; the data are modelled well with a power law ($N \times t^{\alpha}$, where $N=(7.5\pm0.3)\times10^{-11}$ erg cm^{-2} s^{-1}and $\alpha = -0.49\pm0.02$ for $|b| < 10°$ and $N=(6.4\pm0.2)\times10^{-11}$ erg cm^{-2} s^{-1}and $\alpha = -0.49\pm 0.01$ for $|b| > 10°$), both being consistent with the $t^{-0.5}$ behaviour expected if the statistical errors dominate over the systematic ones.

The minimum detection limiting flux is not fully uniform on the sky. Figure 2 shows the limiting flux map in Galactic Aitoff projection, with the ecliptic coordinates grid superimposed. The Galactic centre and the ecliptic plane are characterized by a poorer sensitivity because of high contamination from intense Galactic sources and to the observing constraints on the *Swift* spacecraft. The highest flux sensitivity is achieved close to the ecliptic poles, where a detection flux limit of $\sim 6.2 \times 10^{-12}$ erg cm^{-2} s^{-1} is reached; the lowest flux sensitivity is in the region of the Galactic centre with a detection flux limit of $\sim 3 \times 10^{-11}$ erg cm^{-2} s^{-1}.

We produced all-sky maps in three energy bands (15–30 keV, 15–70 keV and 15–150 keV) using the HEALPIX-based all-sky spherical grid projection (Górski et al. 2005) with a pixel size of ≈2.5 arcmin radius.

[1] http://heasarc.gsfc.nasa.gov/cgi-bin/W3Browse/swift.pl

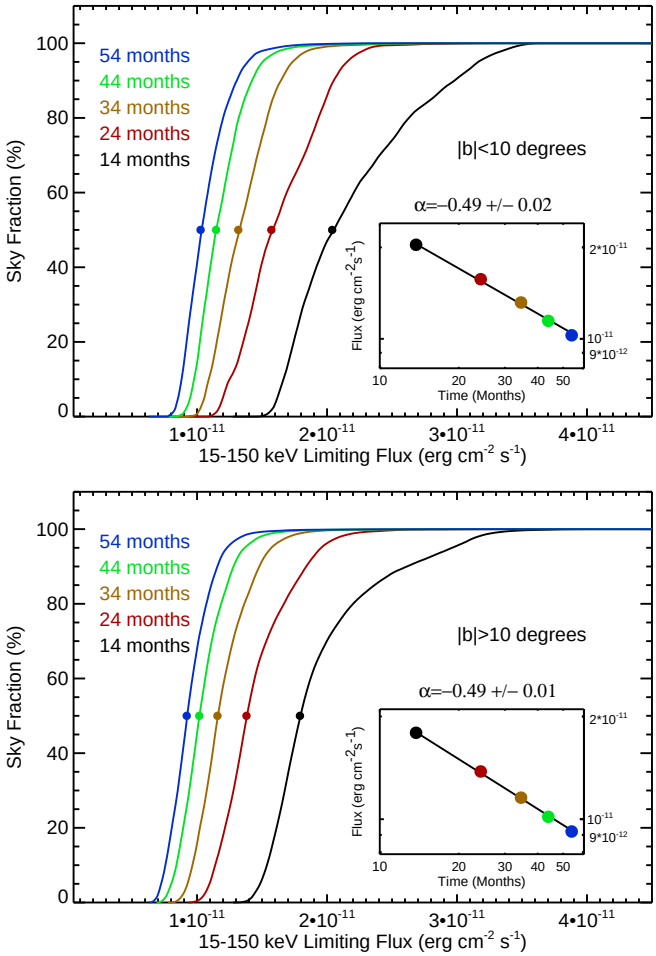

Fig. 1. Fraction of the sky (top: $|b| < 10°$, bottom: $|b| > 10°$) covered by the BAT survey as a function of the 15–150 keV detection limiting flux for a detection threshold of 4.8 standard deviations. Different colours refer to different survey epochs. The insets show the limiting flux achieved for 50% of the sky as a function of time; the best fit is a power law consistent with $t^{-0.5}$.

For each of these energy ranges, we derived a signal-to-noise ratio (S/N) map as the ratio of the mosaic intensity to the associated statistical error. Figure 3 shows the distribution of the significance in the 15–150 keV energy range. This distribution is well described by a Gaussian curve with zero mean and unitary variance, except for the positive tail caused by hard X-ray emitters. The same result was also obtained for the significance maps in the other two energy ranges.

3. Detection strategy

The source detection was performed by searching for local excesses in the S/N maps, then refining their position and peak significance using a local bidimensional fit. Detections with peak significance greater than 4.8 standard deviations were included in our list of detected sources.

Adopting this threshold, we expected ∼ 15 spurious detections on each all-sky map: this number was evaluated by applying the detection algorithm to several all-sky maps obtained from simulated empty field observations. Therefore, the total number

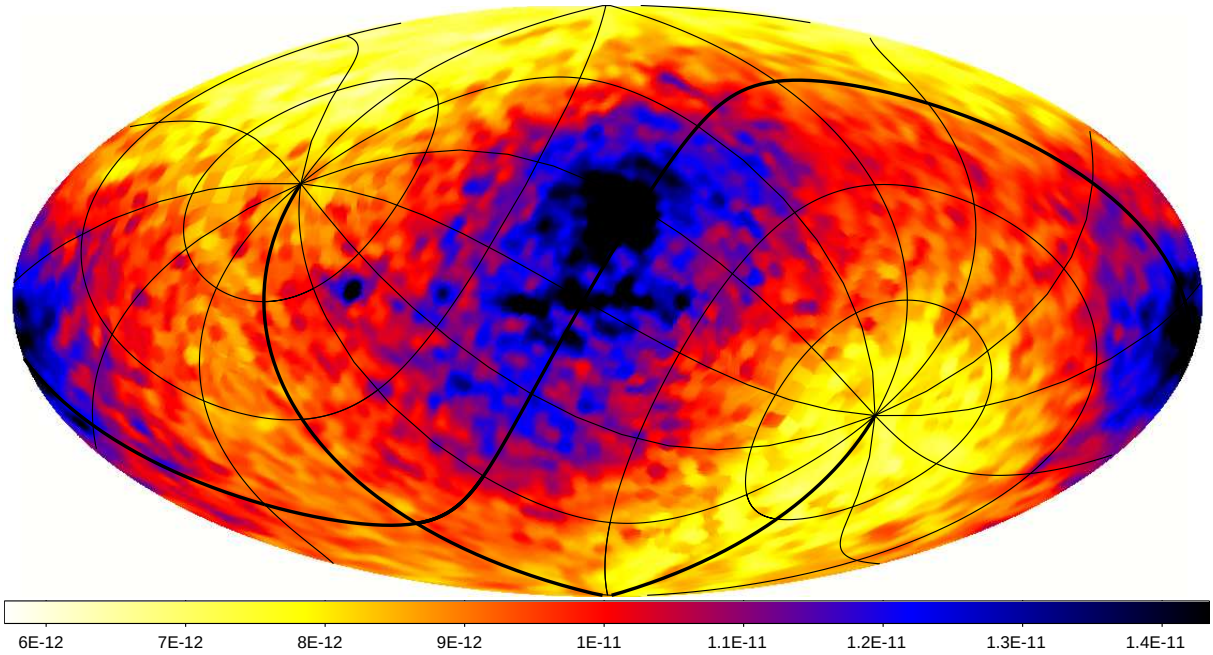

Fig. 2. Map of the limiting flux of the 54-month BAT survey in the 15–150 keV band, projected in Galactic Aitoff coordinates, with the ecliptic coordinates grid superimposed. The colour bar shows the scale in erg cm^{-2} s^{-1}.

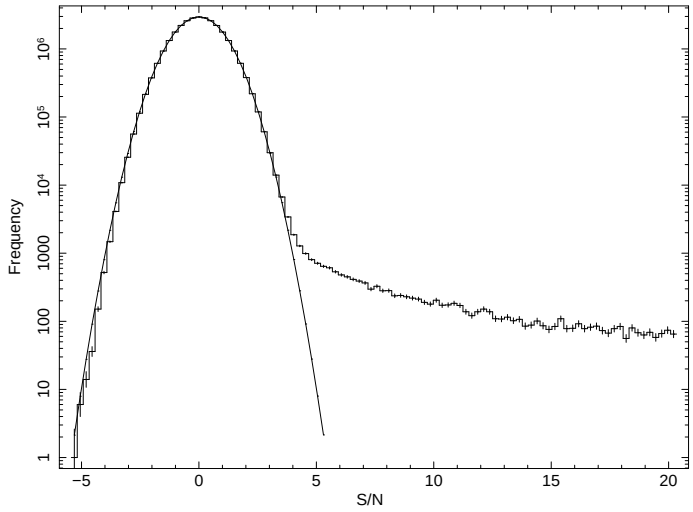

Fig. 3. Distribution of pixel significance in the BAT all-sky map. The continuous curve is the result of a Gaussian fit obtained by excluding the distribution tail. The best-fit model parameters are consistent with a mean and standard deviation of 0.0 and 1.0, respectively.

of spurious detections was between 15 and 45 ($\sim$ 1% to $\sim$ 3% of the total number of our detections, see below), the best case occurring if each noise fluctuation above the threshold appeared simultaneously in all the three bands, the worst case occurring if each fluctuation appeared only in one energy band.

The final catalogue is built by cross-correlating and merging the detection catalogues obtained in the three energy bands: source candidates detected in the sky maps of different energy bands were merged and reported in the final catalogue as a single source candidate if their positions were consistent within the relevant error box (95% containment radius, Segreto et al. 2010).

We obtained a list of 1256 source candidates detected in at least one of the three energy bands: 806 sources were detected in all the three energy bands, 230 in two energy bands, and 220 in only one of the three energy bands (74, 59, and 87 in the 15–150 keV, 15–30 keV, and 15–70 keV map, respectively). We assume the most accurate source coordinates to be those obtained in the sky map with the highest detection significance.

4. Association strategy

To find the most likely counterpart to the detected BAT hard X-ray excesses, we applied two different strategies: an analysis of archival soft X-ray observations (strategy A) and a cross-correlation with a list of possible counterparts (strategy B).

4.1. Strategy A

We analysed all the available soft X-ray archival observations whose field of view covers the position of the BAT source candidates. We first considered the huge set of *Swift*-XRT observations, many of which were performed for this purpose. A total of 751 sky positions of the BAT source candidates were covered by XRT observations. We applied a blind detection algorithm to the XRT images using XIMAGE v4.0. We assumed that an XRT source was the counterpart of a BAT detection if its position was within a 6 arcmin radius error circle (99.7% confidence level for a source detection at 4.8 standard deviations, Segreto et al. 2010) and its rate was higher than 8×10^{-3} count s^{-1} in the 0.2-10 keV energy range or higher than 8×10^{-4} count s^{-1} in the 3-10 keV energy range (criterion 1). These two thresholds were derived by assuming that a source is detected at about the survey limiting flux ($\sim 10^{-11}$ erg cm^{-2} s^{-1}, see Fig. 1) and extrapolating the XRT count rate to a power-law spectral energy distribution of photon index $1 < \Gamma < 3$ and an absorbing column 10^{20} cm^{-2} $< Nh < 10^{24}$ cm-2 and allow us to associate either faint or very absorbed sources with the BAT detection. We found that 595 BAT excesses could be associated with a single XRT source, while 60 BAT excesses could be associated with more than one XRT source (42 with a double association and 18 with

a triple association). In the latter cases, we associate to the BAT excess the XRT source with either a 0.2-10 keV or 3-10 keV count rate at least a factor of 5 brighter than the other candidates in the field (criterion 2). This criterion leaves only 8 BAT excesses with a double XRT association, which are reported in the catalogue. The number of XRT counterpart candidates rejected after applying of this criterion is $42 + 18 \times 2 - 8 = 70$. For 96 of the BAT source candidates covered by an XRT observation, we were unable to detect any soft X-ray counterpart.

To evaluate the number of expected spurious associations, we collected a large sample (365) of XRT observations of GRB fields, using only late follow-ups (where the GRB afterglow had faded) with a similar exposure time distribution as the XRT pointings of the BAT sources. We searched for sources within a 6.0 arcmin error circle centred on the nominal pointing position in each of these fields (excluding any GRB residual afterglow) and satisfying criterion 1. We detected 33 sources that, normalized to the number of XRT follow-ups ($33 \times 751/365 \simeq 68$), is consistent with the number (70) of XRT sources that survived criterion 1 but were rejected by criterion 2. Therefore, the number of expected spurious associations can be assumed to be negligible.

For the BAT positions not covered by XRT observations, we searched for pointed archival observations with other X-ray instruments, in the following order: Beppo-SAX, ASCA, Newton-XMM, Chandra, ROSAT. We did not use ROSAT observations performed during the ROSAT All Sky Survey campaign: the list of sources extracted from this campaign (Voges et al. 1999) was used in strategy B (see Sect. 4.2). A threshold criterion analogous to that applied to the *Swift*-XRT observations was used to select the most reliable association. The rate thresholds for criterion 1 for each instrument were derived by converting the *Swift*-XRT count rate threshold to the relevant equivalent count rate assuming a power law with a photon index $\Gamma = 2$ and an absorbing column of 10^{21}cm^{-2}. For ROSAT, only a 0.2–2.4 keV rate threshold was applied. A total of 288 of the BAT source candidates positions not observed with *Swift*-XRT were covered by observations of these other X-ray telescopes. We identified 275 unambiguous associations and 5 double possible associations. To resolve the ambiguity in these cases, we applied criterion 2 as for XRT, finding no BAT excesses for more than one possible source association. Since we applied the same threshold criteria as for *Swift*-XRT, we can confidently assume a negligible number of spurious associations.

Finally, the identification of the soft X-ray counterpart was performed by searching in the SIMBAD[2] and NED[3] databases within the soft X-ray error box. In the few cases where the soft X-ray counterpart is an unknown source, we report it in our catalogue as a new source with a name composed by the PBCX acronym (Palermo BAT Catalogue X-ray source) followed by its soft X-ray coordinates with the precision of 1.5 arcsec in RA and 1 arcsec in Dec.

With strategy A we were able to associate 920 BAT excesses to a single softer counterpart and 8 BAT excesses to a double softer counterpart. 328 BAT excesses still lacking an association.

4.2. Strategy B

To find an association for the 328 BAT excesses still lacking an association, we adopted the following strategy. We compiled

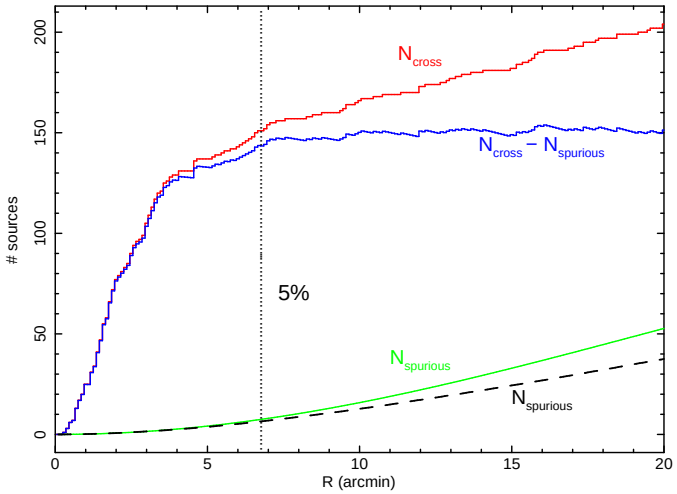

Fig. 4. Cumulative distribution of the number of BAT excesses not associated with strategy A having at least one of the strategy B list sources (see Sect 4) within a given distance (red stepped line). The green continuous line represents the number of spurious associations evaluated using Eq. 1, while the black dashed line is the mean number of spurious associations evaluated by using a control sample of sky positions generated by scrambling the coordinates of the BAT excesses. The blue stepped line represents the true associations obtained as the difference between the red stepped line and the green continuous line. The vertical dotted line marks the radius (6.8 arcmin) that produces 5% of spurious associations.

a list of possible counterparts (hereafter strategy B source list: SBSL) merging the following catalogues:

- high and low mass X-ray binaries, cataclysmic variables, supernova remnants and pulsars, Seyfert galaxies, unclassified AGNs, cluster of galaxies, interacting galaxies, LINERs, and γ-ray sources, whose lists were extracted from the SIMBAD database on January 2010;
- the *Roma*-BZCAT (Massaro et al. 2009);
- the ROSAT All Sky Survey (RASS) Bright source catalogue (Voges et al. 1999).

The resulting catalogue contains $N_{SBSL} = 60\,829$ sources.

The number $N_{cross}(R)$ of BAT excesses for which at least one SBSL source was within a specified distance R is represented by the red stepped line in Fig. 4.

Assuming that N_{true} of the $N_{BAT} = 328$ BAT excesses have a counterpart in a generic catalogue of N_{cat} sources evenly distributed across the sky with a density $\lambda = N_{cat}/4\pi$, the number of expected spurious associations $N_{spurious}$ generated by the $N_{BAT} - N_{true}$ sources without a counterpart in the catalogue is expressed by

$$N_{spurious}(R) = (N_{BAT} - N_{true}) \times \left(1 - e^{-\pi\lambda R^2}\right). \quad (1)$$

To a first approximation we assumed that SBSL is uniformly distributed across the sky, so we apply the above expression with $N_{cat} = N_{SBSL}$. Since N_{true} is not known in advance, we used the following procedure: we increased N_{true} with a unitary step and evaluated the difference between $N_{cross}(R)$ and $N_{spurious}(R)$. after increasing the correlation radius, this curve flattens because no further true associations are obtained. This happens for $N_{true} \sim 195$. The blue stepped line in Fig. 4 shows $N_{cross}(R) - N_{spurious}(R)$ and the green continuous line represents $N_{spurious}(R)$.

[2] http://simbad.u-strasbg.fr/simbad/
[3] http://nedwww.ipac.caltech.edu/

As a further check, we defined a control sample, by generating 1000 lists of $328 - N_{true} = 133$ sky positions: to preserve the Galactic coordinate distribution we scrambled the arrays of Galactic latitude and longitude of the BAT coordinate excesses and then extracted 133 couples of coordinates from these scrambled arrays. The mean number of spurious associations was then evaluated as a function of the association radius (Fig. 4, dashed line). This curve is in perfect agreement with the analytical one (green continuous line) out to ~ 8 arcmin and increases in size more slowly at larger distance. We verified that this difference is due to the inhomogeneity in SBSL and in particular to the clustering of sources in regions covered by deep optical surveys.

The ratio of $N_{spurious}(R)$ to $N_{cross}(R)$ is an estimate of the fraction of spurious association as a function of the association radius. We decided to accept a maximum of 5% of spurious associations that correspond to an association radius of 6.8 arcmin. With this strategy, we associate 151 BAT sources with counterparts (131 with a single counterpart, 18 with a double counterpart, and 2 with a triple counterpart). The expected number of spurious associations is 6.8 ± 2.5.

As a result of these two association procedures, we found that 1079 BAT sources have at least an associated counterpart (1051 with a single counterpart, 26 with a double counterpart, and 2 with a triple counterpart) and that 177 sources still lack a counterpart. The probability of spurious association is negligible for sources associated with strategy A and 5% for those associated with strategy B.

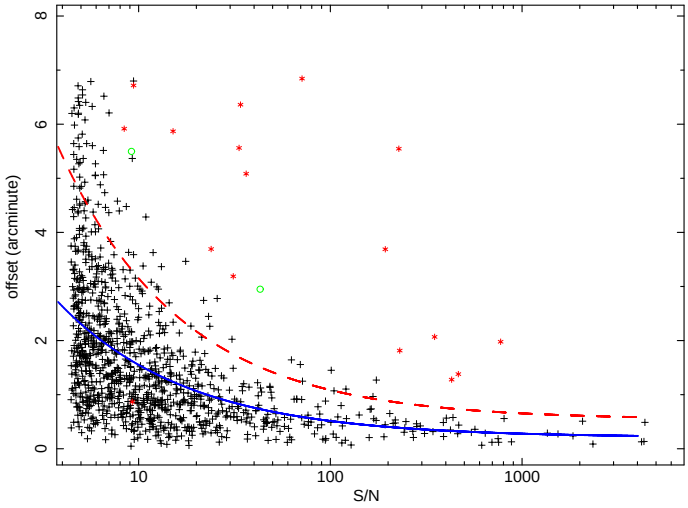

Fig. 5. Offset between the BAT position and the counterpart position as a function of the detection significance. A few values are far from the overall distribution either because they are in crowded fields and their reconstructed sky position is contaminated by the PSF of the nearest sources (red stars) or because they are extended sources (green circles). The solid blue line represents the fit to the data (excluding the outliers) with a power law. The dashed red line represents the 95% containment radius.

In Fig. 5, we plot the offsets of each BAT source excess with respect to its associated counterpart versus (vs.) the detection significance (S/N). The offset of a few sources is far from the overall distribution: points indicated by a star (sources number 286, 328, 796, 856, 860, 869, 870, 902, 928, 949, 950, 954, 955, 956, 963, 977, and 979 in Table 2) are in crowded fields, and the reconstructed sky position is contaminated by the PSF of the nearest sources; those marked with a circle are extended sources (Coma cluster and Abell 2256). The distribution (excluding the outliers) can be modelled with a power law plus a constant giving the following best fit equation:

$$\mathrm{Offset}(') = (7.2 \pm 1.2) \times [\mathrm{S/N}]^{-0.76\pm0.10} + (0.21 \pm 0.03), \qquad (2)$$

where the constant represents the systematic offset. At the detection threshold of 4.8 standard deviations, the average offset is 2.4 arcmin. The dashed red line in Fig. 5 represents the 95% radius containment radius evaluated as described in Segreto et al. (2010),

$$R_{95}(') = 12.5 \times [\mathrm{S/N}]^{-0.68} + 0.54 \qquad (3)$$

where S/N is the detection significance.

5. The 54-month catalogue

The complete catalogue of the sources detected in the first 54 months of BAT survey data is reported in Table 2. The table contains the following information:

- Second Palermo BAT catalogue (2PBC) name of the source (Col. 2), built from the BAT coordinates with the precision of 1.5 arcmin on RA and 1 arcmin on Dec.
- Counterpart association (Col. 3) and source type (Col. 4) coded according to the nomenclature used in SIMBAD. For the blazars included in the Roma-BZCAT (Massaro et al. 2009), we report the nomenclature used in that catalogue: BZB for BL Lac objects, BZQ for flat-spectrum radio quasars, and BZU for blazars of uncertain type.
- The RA and Dec of the BAT source in decimal degrees (Cols. 5, 6) measured in the energy band with the highest detection significance.
- The 95% error radius (Col. 7) and offset with respect to the counterpart position (Col. 8).
- Source significance (Col. 9) obtained in the energy band with the highest significance (a flag in Col. 19 indicates the energy range with the maximum significance).
- Flux and errors (Cols. 10 and 11) in the 15–150 keV band averaged over the entire survey period. To produce spectra for the detected sources, we created all-sky maps in eight energy bands (15–20 keV, 20–24 keV, 24–35 keV, 35–45 keV, 45–60 keV, 60–75 keV, 75–100 keV, and 100–150 keV) from which we extracted the rates and their errors from the pixel corresponding to the most likely position of each BAT source (Sect. 3). These spectra were analysed using the BAT spectral redistribution matrix[4] and the fluxes in the 15–150 keV were evaluated by fitting the spectra with a simple power law.
- Hardness ratio (HR, Col. 12) and error (Col. 13) obtained as the ratio of the counts in the 35–150 keV band to those in the 15–150 keV band.
- Redshift of the extragalactic sources (Col. 14) from the SIMBAD database (or NED, for the few cases that were not reported in SIMBAD).
- Rest-frame luminosity (in units of log[erg s^{-1}]) in the 15–150 keV band (Col. 15) calculated, when the redshift is available, using the expression

$$L_{15-150keV} = 4\pi D_L^2 \frac{F_{15-150}}{(1+z)^{2-\Gamma}}, \qquad (4)$$

[4] http://heasarc.gsfc.nasa.gov/docs/heasarc/caldb/data/swift/bat/index.html

where F_{15-150} is the observed flux in the 15–150 keV band, Γ is the photon index obtained from the spectral fit, D_L is the luminosity distance of the source, and z is its redshift. For sources with redshift < 0.01, we used the distance reported in the Nearby Galaxies Catalogue (NBG, Tully 1988) or NED, for the few cases that were not reported in the NBG catalogue.

– Variability index (Col. 16). In this second catalogue, we added a characterization of the time behaviour of the BAT-detected sources: the light curve of each source was binned at 7 days and the variability was investigated using a simple χ^2 test. The rate in the jth 7-day time bin (R_j) is evaluated by weighting the rates of the light curve at maximum resolution by the inverse square of the corresponding statistical error

$$R_j = \frac{\sum r_i/er_i^2}{\sum 1/er_i^2}, \quad (5)$$

where r_i are the rates observed in the light curve at maximum resolution, and er_i are the corresponding statistical errors. The error in R_j is $ER_J = \left(\sqrt{\sum 1/er_i^2}\right)^{-1}$. The variability index is defined as

$$V = \sum w_j(R_j - < R >), \quad (6)$$

where $w_j = [ER_J^2 + (f \times R_j)^2]^{-1}$ and $< R >= \sum w_j R_j / \sum w_j$. A systematic error of $f \times R_j$ with $f = 5\%$ was added in quadrature to the statistical error of each bin, to obtain a variability index V$\sim$ 1 for Crab, Vela Pulsar, and PSR 0540-69.

– Flag column (Col. 17) with information on: energy band with the highest significance (A), flag for already known hard X-ray sources (B), position with respect to the Galactic plane (C), and strategy used for the identification (D, see Sect. 4)

– Flag column (Col. 18) with information on the cross correlation between the BAT sources and the ROSAT, INTEGRAL, and *Fermi* catalogues. A BAT source is associated with a ROSAT source if the BAT counterpart lies within the 3σ error box of a source reported in the RASS bright and faint source catalogues (Voges et al. 1999, 2000). The cross-correlations of the BAT catalogue with the ISGRI sources and the Fermi sources were performed using the INTEGRAL General Reference Catalogue V.31[5] and the Fermi Large Area Telescope First Source Catalogue [6](Abdo et al. 2010), respectively, requiring that the sources had the same associated counterpart.

6. Statistical properties of the catalogue

Table 1 compares the numbers of counterparts associated with the sources detected in the 54-month all-sky mosaic among the different object classes, with similar results for the 39-month catalogue. Percentages are evaluated for both catalogues relative to the total number of BAT-detected sources. The sample consists of $\sim$ 19% Galactic sources, $\sim$ 56% extragalactic sources, and $\sim$ 10% sources with a counterpart at softer energies whose nature has not yet been determined. We also found that $\sim$ 15% of sources have no association at other wavelengths. The distribution of the associated sources among the different classes is almost identical to that of the 39-month catalogue. There is a significant difference for the fraction of unassociated sources, which is a factor $\sim$ 1.6 lower than in the 39-month catalogue. This is because a *Swift*-XRT follow-up campaign was requested for the unassociated sources of the 39-month catalogue and the ROSAT catalogue was used in the association strategy of the 54-month catalogue. In contrast, we have a much higher fraction of unclassified sources ($\sim$ 10%), most of which are ROSAT sources of unknown nature. Figure 6 shows the map of the detected sources, colour-coded according to the object class and size-coded according to the 15–150 keV source flux (A), the hardness ratio (B), and the variability index (C), respectively.

Class	# in 54m (%)	# in 39m (%)
LXB	85 (6.6)	76 (7.9)
HXB	83 (6.5)	64 (6.6)
Pulsars	11 (0.9)	10 (1.0)
SNR	7 (0.5)	5 (0.5)
Cataclysmic variables	56 (4.4)	46 (4.8)
Stars	7 (0.5)	5 (0.5)
Star clusters	1 (0.1)	0 (0.0)
Galactic (total)	250 (19.5)	207 (21.5)
Seyfert 1 galaxies	307 (23.9)	235 (24.4)
Seyfert 2 galaxies	165 (12.8)	131 (13.6)
LINERs	15 (1.2)	7 (0.7)
QSO	25 (1.9)	14 (1.5)
Blazars	97 (7.5)	71 (7.4)
Interacting galaxies	2 (0.16)	0 (0.0)
Galaxy clusters	23 (1.8)	18 (1.9)
Normal galaxies	67 (5.2)	27 (2.8)
Unclassified AGN	34 (2.6)	16 (1.7)
Extragalactic (total)	735 (57.1)	519 (54.0)
Unclassified sources	124 (9.6)	28 (2.9)
Unassociated sources	177 (13.8)	208 (21.6)

Table 1. Classification of the counterparts associated with the sources detected in the 54-month BAT survey. *Unclassified sources* includes all sources that have a catalogued counterpart but have not yet been classified.

Figure 7 shows the HR distribution for each class of objects. As expected, the HR distribution for BZB is softer than for BZQ: this difference arises because the 15–150 keV band samples the high energy tail of the synchrotron peak for BZB and the rising part of the Compton peak for BZQ. Blazars of uncertain classification (BZU) show an intermediate HR distribution. Clusters of galaxies fall in a very narrow region of soft HR: we verified that their spectral distribution is consistent with the tail of a thermal emission with kT $\sim$ 10 keV, except for one object (CIZA J0635.0+2231), with HR=0.26, where we find evidence of hard non-thermal emission that may be related to the AGN content of the cluster. The catalogue lists **67** objects classified as normal galaxies. The HR distribution of these sources peaks at $\sim$ 0.4 in a similar way to the other classes of active galaxies. This suggests that these objects may also contain an active nucleus.

The HR distribution of the sources with uncertain classifications and of unassociated sources suggests that most of these are of extragalactic nature.

Figure 8 shows the distribution of the redshift (top panel) and luminosity (bottom panel) of the Seyfert 1 and Seyfert 2 galaxies included in the 54-month catalogue. The median of the redshift distribution is higher for Seyfert 1s ($\tilde{z}_{Sy1}$=0.040) than for Seyfert 2s ($\tilde{z}_{Sy2}$=0.025). The luminosity distribution shows that Seyfert 1s are intrinsically more luminous than Seyfert 2s.

[5] http://www.isdc.unige.ch/integral/data/catalog

[6] http://fermi.gsfc.nasa.gov/ssc/data/access/lat/1yr_catalog/

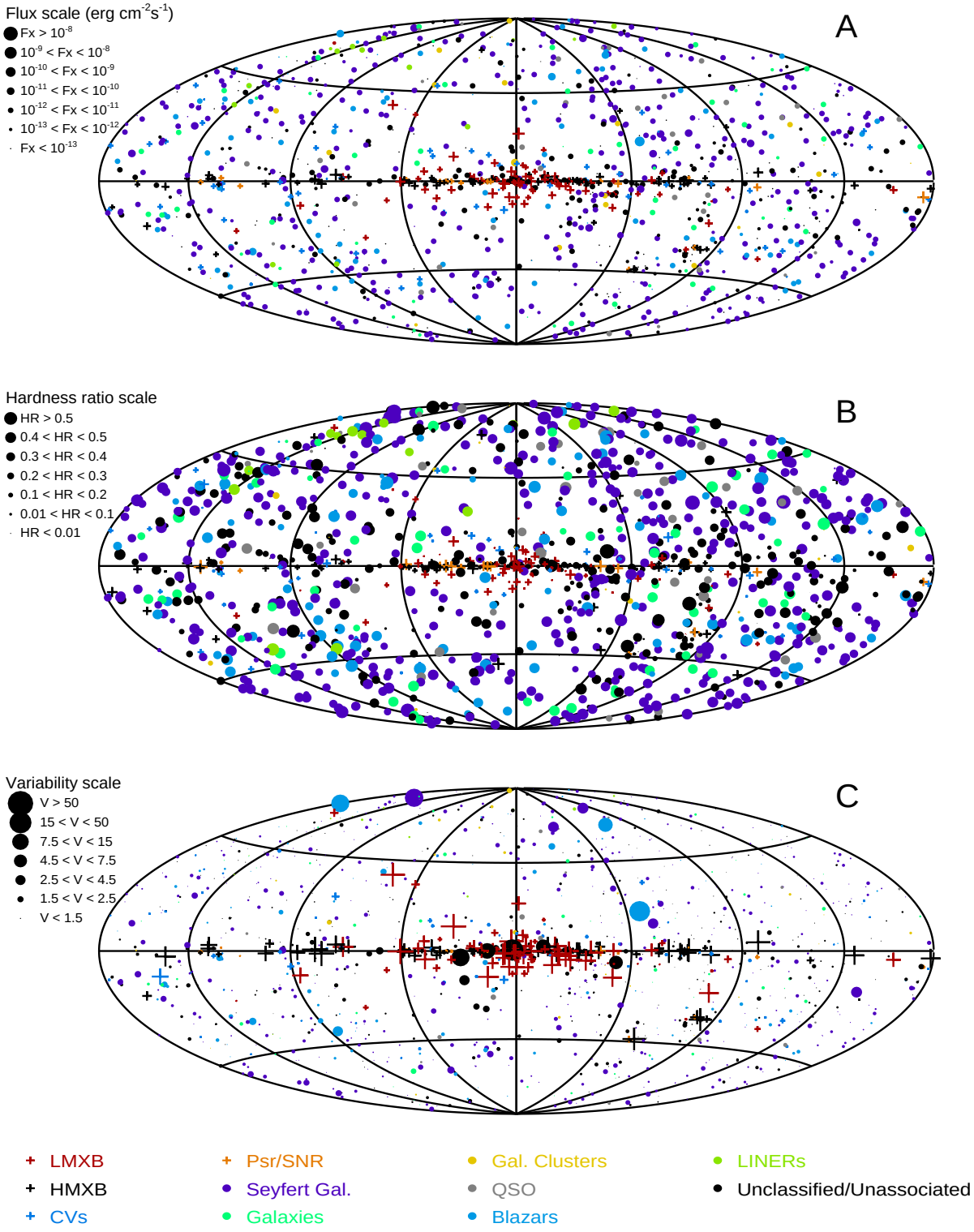

Fig. 6. Map of the sources (in Galactic coordinates) detected in the BAT survey data. The object class is colour-coded according to the legend. The size of the symbol is proportional to **(A)** the 15–150 keV source flux, **(B)** the hardness ratio obtained as the ratio of the counts in the 35–150 keV band to those in the 15–150 keV band, **(C)** the variability index (as defined in Sect. 5).

6.1. The 54-month BAT catalogue and the INTEGRAL-ISGRI catalogue

We compared the sources detected in the 54-month BAT all-sky mosaic with those detected by INTEGRAL-ISGRI and reported in the INTEGRAL General Reference Catalogue V.31. The results are plotted in Fig. 9. For each object class, we report the sources detected by each of the two telescopes, highlighting those detected only by BAT. While ISGRI dedicated most of the first years of its mission to a deep scan of the Galactic plane, BAT has taken advantage of its larger (with respect to ISGRI) field of view and different pointing strategy to achieve a uniform exposure of the whole sky. Within the Galactic sample, the number of low mass and high mass X-ray binaries is marginally higher

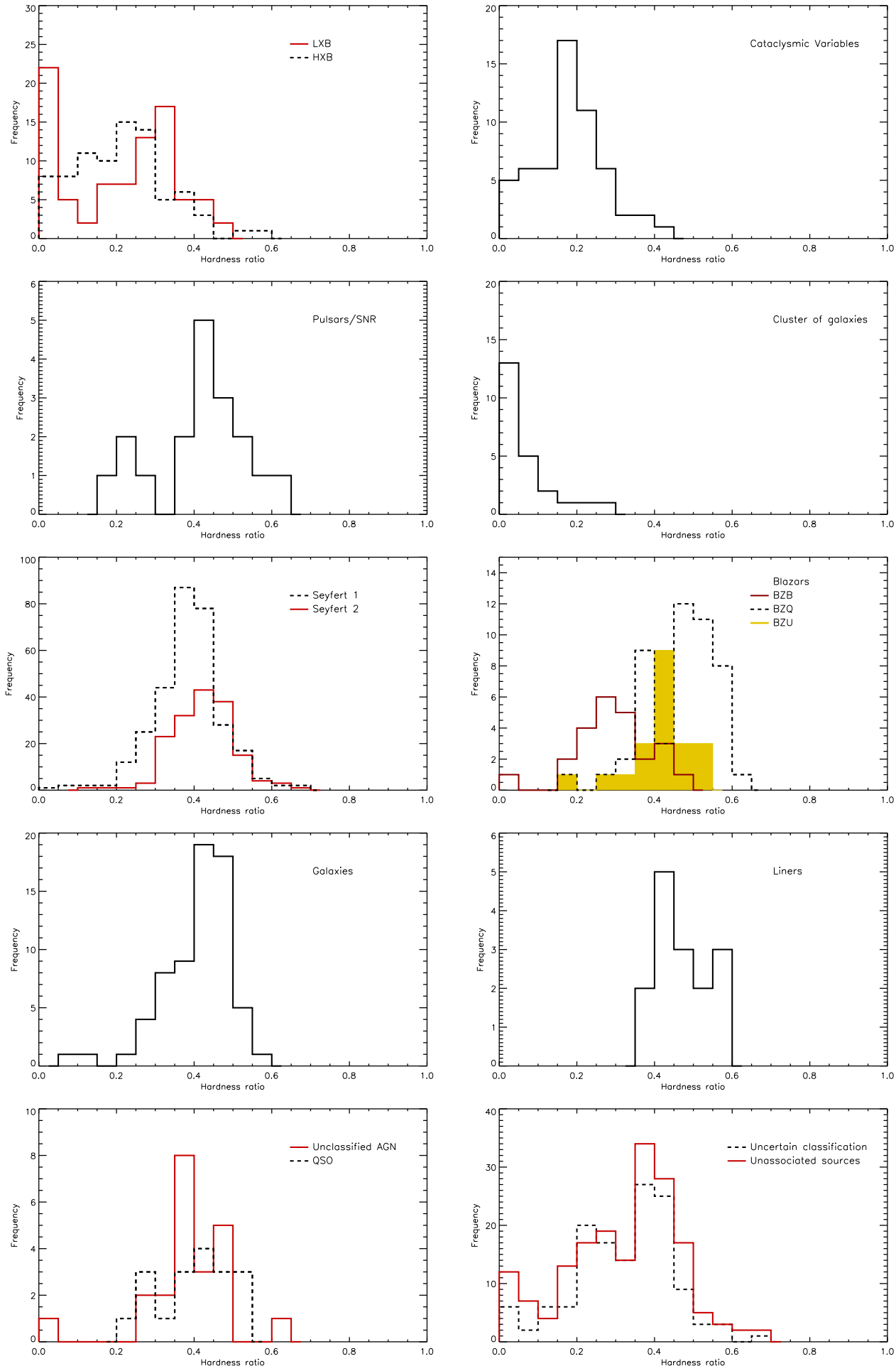

Fig. 7. Hardness ratio (35-150 keV)/(15-150 keV) distributions for the different classes of objects detected in the 54 months of BAT survey.

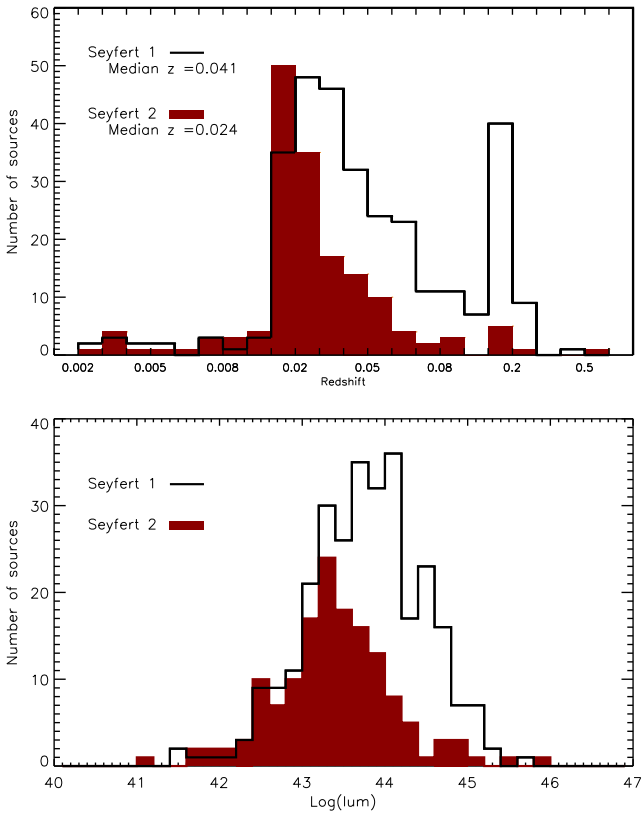

Fig. 8. Redshift distribution (top) and luminosity distribution (bottom) of the Seyfert galaxies.

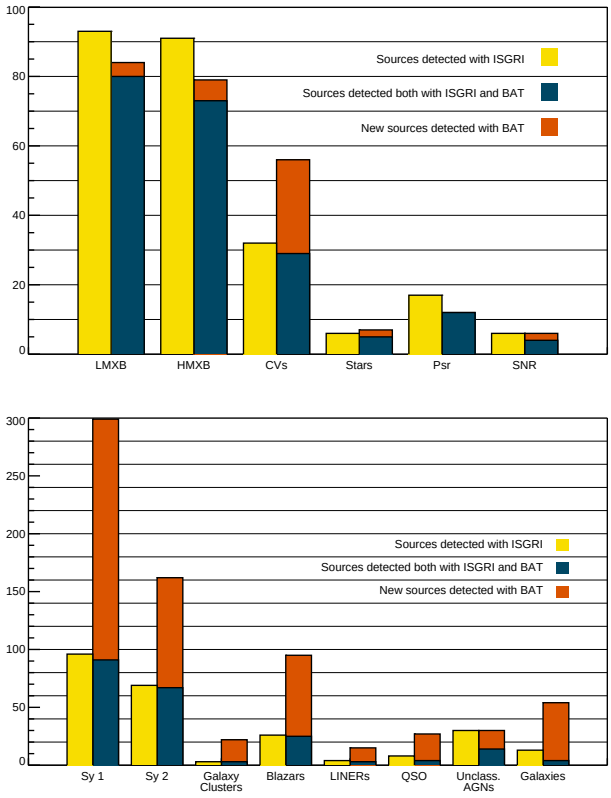

Fig. 9. Comparison between the sources in our catalogue and those detected with ISGRI and reported in the INTEGRAL General Reference Catalogue V31. Top: Galactic sources. Bottom: extragalactic sources.

in the ISGRI catalogue, although 10 sources are detected only with BAT. These sources have a transient behaviour and are captured by BAT thanks to its larger field of view or because they are located in regions of low ISGRI exposure. BAT also detects a much larger sample (nearly a factor of 2) of cataclysmic variables, which are located mostly outside the Galactic plane. The BAT extragalactic sample is a factor of between 2 and 3 larger than the ISGRI sample, depending on the object class. This is expected because of the lower limiting flux reached by BAT outside the Galactic plane.

6.2. The 54-month BAT catalogue and the Fermi Large Area Telescope First Source Catalogue

We compared our BAT catalogue with the Fermi Large Area Telescope First Source Catalogue (Abdo et al. 2010) by searching for BAT sources whose position falls inside the error box of each Fermi sources[7].

We found 59 BAT/Fermi correspondences to be associated with the same counterpart: 16 BZBs, 27 BZQs, 5 BZUs, 3 Seyfert galaxies, 1 interacting galaxy, 3 high mass X-ray binaries, and 4 pulsars/supernova remnants. Moreover, there are 4 BAT/Fermi correspondences with different counterpart association, and 10 BAT/Fermi correspondences for which the Fermi source has not been associated with any counterpart. These 14 sources have been flagged with '?' in Col. 18 of Table 2.

The largest sample of common sources is the blazar sample. In line with our association strategy, we considered only Fermi blazars with a correspondence in the BZCAT. Figure 10 shows the redshift distributions of the selected common samples, superimposed on the redshift distributions of the whole Fermi and BAT blazar samples. The median of the redshift distribution for BZB is a factor of 2 higher for the Fermi sample than the BAT one, while the common sample has value in between these two. The median of the BAT and Fermi BZQ redshift distributions are very similar. The most distant blazar, 87GB 224928.1+22014 at z$\sim$ 3.667, is detected only by BAT.

[7] http://fermi.gsfc.nasa.gov/ssc/data/access/lat/1yr_catalog/

7. Conclusions

We have analysed the BAT hard X-ray survey data of the first 54 months of the *Swift* mission. The 5 σ 15–150 keV survey flux limit achieved on 50% of the sky is $\sim 0.9 \times 10^{-11}$ erg cm^{-2} s^{-1}(0.43 mCrab).

We have compiled all-sky maps for three energy bands (15–30 keV, 15–70 keV, and 15–150 keV) and searched for excesses above a significance threshold of 4.8 standard deviations. The final catalogue, obtained by cross-correlating and merging the lists of excesses detected in the three energy bands, contains 1256 source candidates. For each of them, we have searched for counterparts at lower energies using two different strategies. First we have analysed archival soft X-ray observations covering the position of the BAT excesses, applying count rate thresholds to select the most likely counterparts (strategy A). With this strategy, we have been able to associate 920 BAT excesses with a single softer counterpart; for 8 BAT excesses, we found two possible counterparts. The BAT excesses lacking any association after strategy A were cross-correlated with a list of possible counterparts compiled by merging several source lists (X-ray bina-

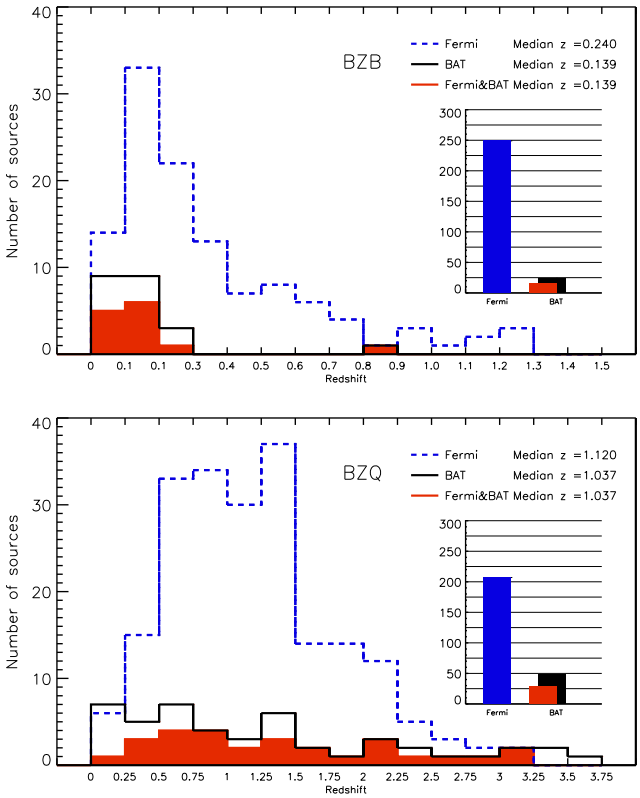

Fig. 10. Redshift distribution of the BZB (top) and BZQ (bottom) sources. The red line, the black dashed line, and the shaded blue area refer to blazars detected by Fermi, *Swift*–BAT, and common to both catalogues, respectively. The insets show the total number of blazars in each sample.

ries, cataclysmic variables, supernova remnants, pulsars, cluster of galaxies, different classes of active galaxies, already known soft X-ray and γ-ray sources). This second strategy (strategy B) enabled us to associate 151 BAT sources with counterparts (18 with a double association, 2 with a triple association). The final catalogue contains 1079 BAT sources with at least one associated counterpart and 177 unassociated sources ($\sim$ 14%). The latter will be the subject of a follow-up campaign with *Swift*-XRT in the immediate future. The sources among the different object classes consist of $\sim$ 19% Galactic sources, $\sim$ 57% extragalactic sources, and $\sim$ 10% sources with a counterpart at softer energies whose nature has not yet been determined.

The counterpart of 563 of the 1079 BAT sources with at least one associated counterpart is coincident with a bright ROSAT source, while 83 BAT sources have a counterpart consistent with the position of a faint ROSAT source. The remaining BAT counterparts (640) do not have any ROSAT correspondence. This may be the signature of either moderate or strong absorption preventing detection in the ROSAT energy band.

Compared to the INTEGRAL-IBIS telescope, BAT has detected a much larger number of extragalactic sources. This difference is mainly due to the different fields of view of the two telescopes and their different observing strategies.

The comparison of our BAT catalogue with the Fermi Large Area Telescope First Source Catalogue (Abdo et al. 2010) has established that 59 BAT/Fermi sources are associated with the same counterpart: 16 BZBs, 27 BZQs, 5 BZUs, 3 Seyfert galaxies, 1 interacting galaxy, 3 high mass X-ray binaries, and 4 pulsars/supernova remnants. These small number of correspondences clearly indicates that the sky at these two different energy ranges is populated by different source types.

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Table 2. BAT 54-month catalogue

	PBC name	ID	Type[a]	RA (deg)	Dec (deg)	Error radius (arcmin)	Offset (arcmin)	SNR	Flux[b] (erg cm^{-2} s^{-1})	Hardness ratio (R_{30-150}/R_{14-150})	Redshift	log L_{14-150}[c] (erg s^{-1})	Var	Flag 1[d] A B C D	Flag 2[e] I R F
1	**2PBC J0000.3+0416**	...	...	0.092	4.270	4.99	...	5.03	0.7 ± 0.5	0.4 ± 0.2	...	...	1.34	1 N h	
2	**2PBC J0000.9-0708**	...	...	0.234	-7.134	4.42	...	5.58	1.4 ± 0.7	0.33 ± 0.09	...	...	1.59	2 N h	
3	**2PBC J0001.8-7658**	...	...	0.466	-76.982	4.46	...	5.50	0.9 ± 0.6	0.6 ± 0.2	...	...	1.91	3 N h	
4	**2PBC J0002.5+0320**	NGC 7811	Sy1	0.643	3.337	4.61	2.12	5.20	0.9 ± 0.6	0.5 ± 0.2	0.0255	43.12	1.44	3 N h b	b
5	**2PBC J0004.1+7017**	2MASX J00040192+7019185	AG?	1.035	70.298	4.90	1.54	5.17	0.9 ± 0.6	0.4 ± 0.1	0.0960	44.32	1.38	3 N h a	I
6	2PBC J0006.3+2012	Mrk 335	Sy1	1.591	20.199	2.78	0.60	12.55	1.4 ± 0.8	0.25 ± 0.06	0.0254	43.33	1.80	3 Y h a	b
7	**2PBC J0009.3-0034**	2MASX J00091156-0036551	Sy2	2.338	-0.576	4.02	3.35	6.56	0.8 ± 0.5	0.4 ± 0.1	0.0732	44.03	1.61	1 N h b	
		[VV2003c] J000939.5-0032	Sy1				5.06				0.0400	43.48			
8	2PBC J0010.4+1059	Mrk 1501	BZQ	2.606	10.990	2.56	1.65	14.58	2.5 ± 0.7	0.35 ± 0.05	0.0893	44.69	1.71	3 Y h a	b
9	**2PBC J0014.3-1851**	BZBJ0013-1854	BZB	3.579	-18.860	4.95	5.98	5.09	0.6 ± 0.4	0.3 ± 0.2	0.0940	44.13	1.63	3 N l b	b
10	**2PBC J0017.4-8152**	1RXS J001928.1-815247	X	4.365	-81.870	4.98	4.29	5.04	0.5 ± 0.4	0.4 ± 0.2	...	...	1.87	1 N l a	b
11	2PBC J0018.3+8135	S5 0014+81	BZQ	4.605	81.587	3.90	2.81	6.91	0.9 ± 0.5	0.30 ± 0.10	3.3870	48.30	1.55	3 Y h a	b
12	**2PBC J0021.0-1908**	1RXSJ002108.1-190950	X	5.264	-19.145	3.88	1.57	6.95	1.1 ± 0.7	0.4 ± 0.1	0.0952	44.40	1.97	1 N h b	b
13	2PBC J0023.0+6138	IGR J00234+6141	CV*	5.733	61.655	4.07	3.08	6.42	0.5 ± 0.3	< 0.1	...	...	1.28	1 Y l a	I
14	2PBC J0024.9+6407	TYCHO SNR	SNR	6.291	64.171	2.65	1.06	13.64	1.3 ± 0.7	0.16 ± 0.05	...	...	1.58	2 Y l a	I
15	2PBC J0025.6+6823	IGR J00256+6821	Sy2	6.394	68.401	3.61	2.30	7.89	1.4 ± 0.9	0.51 ± 0.10	0.0120	42.66	1.31	3 Y h a	I
16	**2PBC J0025.8-1900**	2MASX J00254238-1900106	Sy1	6.470	-19.006	4.81	2.45	4.84	0.8 ± 0.6	0.4 ± 0.2	0.2450	45.10	1.67	3 N h b	b
		1RXS J002605.4-185456	X				6.18				...	...			
17	**2PBC J0026.7-5309**	1RXS J002640.2-530944	X	6.685	-53.163	4.83	0.61	4.82	0.9 ± 0.6	0.5 ± 0.2	0.0628	43.92	1.69	1 N h b	b
18	2PBC J0028.9+5917	V709 Cas	DQ*	7.213	59.296	1.40	0.50	50.93	6.8 ± 0.3	0.24 ± 0.01	...	...	1.78	2 Y l a	I b
19	2PBC J0029.3+1317	RBS 0068	Sy1	7.303	13.265	3.79	0.27	7.24	1.0 ± 0.6	0.3 ± 0.1	0.1450	44.76	1.34	3 Y h a	b
20	**2PBC J0030.5-5902**	...	...	7.647	-59.042	4.14	...	6.23	1.0 ± 0.6	0.4 ± 0.1	...	...	1.93	3 N h	
21	2PBC J0033.2+6130	IGR J00333+6122	Sy1	8.434	61.466	2.90	3.07	11.63	1.5 ± 0.5	0.28 ± 0.06	0.1050	44.64	1.53	1 Y l a	I
22	**2PBC J0034.1-7906**	2MASX J00341665-7905204	Sy1	8.543	-79.113	4.91	1.45	5.17	0.4 ± 0.3	< 0.2	0.0740	43.81	1.47	2 N h b	b
23	**2PBC J0034.6-0424**	2MASX J00343284-0424117	G	8.653	-4.403	4.42	0.96	5.58	1.2 ± 0.8	0.5 ± 0.1	...	...	1.14	3 N h a	
24	2PBC J0035.8+5951	1ES 0033+59.5	BZB	8.955	59.849	2.17	0.96	20.08	2.5 ± 0.4	0.23 ± 0.03	...	...	2.59	2 Y l a	I b F
25	**2PBC J0036.3+4539**	2MASX J00362092+4539532	Sy1	9.065	45.640	4.18	1.76	6.14	1.0 ± 0.6	0.3 ± 0.1	0.0477	43.74	1.54	3 N h b	
26	2PBC J0037.2+6120	IGR J00370+6122	HXB	9.229	61.384	2.73	2.27	12.95	1.6 ± 0.6	0.29 ± 0.06	...	...	2.45	1 Y l a	I b
27	**2PBC J0038.5+2336**	Mrk 344	G	9.628	23.607	4.79	0.40	4.89	1.0 ± 0.6	0.5 ± 0.1	0.0250	43.14	1.48	1 N h a	
28	**2PBC J0040.5+2542**	...	...	10.143	25.715	5.04	...	4.94	0.5 ± 0.3	0.4 ± 0.2	...	...	1.38	2 N h	
29	**2PBC J0040.9-7915**	2MASX J00404625-7914244	Sy1	10.237	-79.258	4.48	1.17	5.46	0.4 ± 0.3	< 0.2	0.0333	43.02	1.56	2 N h b	b
30	2PBC J0041.6+2534	NGC 214	LIN	10.395	25.571	3.65	4.57	7.75	0.9 ± 0.6	0.6 ± 0.2	0.0150	42.68	1.49	1 Y h a	
31	2PBC J0041.7-0920	ABELL 0085	ClG	10.436	-9.363	4.14	2.06	6.24	0.6 ± 0.4	0.1 ± 0.1	0.0521	43.61	1.59	2 Y h a	
32	2PBC J0042.6+4111	RX J004241+41155	LXB	10.668	41.174	4.35	5.60	5.74	0.7 ± 0.4	0.3 ± 0.1	...	...	1.35	2 Y h a	
33	**2PBC J0042.7+3017**	1RXS J004240.8+301742	Sy1	10.696	30.312	3.21	1.70	9.66	1.2 ± 0.7	0.26 ± 0.08	0.1400	44.83	1.59	3 N h b	b
34	2PBC J0042.8-2331	NGC 235A	Sy2	10.720	-23.536	2.08	0.27	21.66	4.6 ± 0.4	0.42 ± 0.03	0.0222	43.71	1.67	3 Y h a	
35	**2PBC J0042.9-1135**	...	...	10.745	-11.592	4.65	...	5.13	0.4 ± 0.2	< 0.2	...	...	1.77	2 N h	
36	**2PBC J0046.1-4007**	ATESP J004620-400547	G	11.527	-40.123	4.18	3.09	6.15	1.0 ± 0.6	0.5 ± 0.1	0.2263	45.17	1.33	3 N h a	I
37	2PBC J0048.7+3157	Mrk 348	BZU	12.185	31.954	1.19	0.62	76.47	13.5 ± 0.3	0.418 ± 0.009	0.0151	43.84	2.95	3 Y h a	I
38	**2PBC J0050.8+7648**	1RXS J005107.0+765042	X	12.720	76.816	4.29	1.93	5.86	1.0 ± 0.6	0.5 ± 0.1	...	...	1.31	1 N h b	b
39	2PBC J0051.8-7318	SNR B0049-73.6	SNR	12.913	-73.315	2.86	3.62	11.90	1.4 ± 0.7	0.24 ± 0.06	...	...	2.81	2 Y h a	b
40	2PBC J0051.9+1725	Mrk 1148	Sy1	13.010	17.437	2.40	1.82	16.51	2.7 ± 0.5	0.33 ± 0.04	0.0642	44.42	1.89	3 Y h a	b
41	**2PBC J0052.6-7220**	SXP 327	XB*	13.155	-72.336	4.65	3.11	5.14	0.8 ± 0.4	0.3 ± 0.1	...	...	1.59	1 N h a	
42	**2PBC J0053.2-0844**	NGC 291	Sy1	13.322	-8.736	4.91	3.65	5.16	0.9 ± 0.6	0.6 ± 0.2	0.0189	42.88	1.45	1 N h a	
43	2PBC J0054.6+2521	RBS 0130	Sy1	13.710	25.415	4.32	0.86	5.80	1.0 ± 0.5	0.2 ± 0.1	0.1550	44.83	1.81	2 Y h a	b
44	2PBC J0055.3+4612	XSS J00564+4548	CV*	13.838	46.202	2.23	0.83	18.91	2.0 ± 0.7	0.17 ± 0.04	...	...	1.36	2 Y h a	
45	2PBC J0056.5+6043	gam Cas	Be*	14.174	60.714	1.29	0.16	62.76	6.8 ± 0.2	0.12 ± 0.01	...	...	2.11	2 Y l a	I b
46	**2PBC J0056.8-6002**	...	...	14.207	-60.049	4.89	...	5.19	0.1 ± 0.1	< 0.2	...	...	1.80	2 N h	
47	**2PBC J0057.2+6401**	...	...	14.317	64.032	4.19	...	6.11	0.8 ± 0.5	0.4 ± 0.1	...	...	1.89	3 N l	
48	**2PBC J0058.0-1648**	...	...	14.520	-16.816	4.96	...	5.07	0.6 ± 0.5	0.4 ± 0.2	...	...	1.81	3 N h	
49	2PBC J0059.8+3150	Mrk 352	Sy1	14.977	31.847	2.30	1.25	17.91	2.9 ± 0.4	0.40 ± 0.04	0.0149	43.16	1.94	1 Y h a	b
50	2PBC J0100.6-4752	ESO 195-IG 021	Sy1	15.182	-47.875	3.33	1.50	9.08	1.2 ± 0.7	0.38 ± 0.09	0.0494	43.83	1.72	3 Y h a	
51	**2PBC J0101.4-0307**	1RXS J010123.5-030846	X	15.357	-3.124	4.70	1.44	5.04	1.0 ± 0.7	0.4 ± 0.1	...	...	1.50	1 N h b	b
52	**2PBC J0102.7-7241**	XTE J0103-728	HXB	15.683	-72.687	3.26	3.58	9.40	0.6 ± 0.3	< 0.1	...	...	1.69	2 N h b	F
		RX J0104.1-7244	HXB				6.79				...	...			
53	**2PBC J0105.3+3602**	...	...	16.326	36.039	4.98	...	5.04	0.4 ± 0.3	0.4 ± 0.3	...	...	1.42	1 N h	
54	**2PBC J0105.5-4211**	MCG-07-03-007	G	16.375	-42.192	3.87	1.57	7.01	1.0 ± 0.6	0.5 ± 0.1	0.0302	43.33	1.63	3 N h a	
55	2PBC J0105.7-1415	RBS 0149	Sy1	16.433	-14.256	3.62	1.48	7.86	1.3 ± 0.6	0.28 ± 0.08	0.0670	44.16	1.25	3 Y h a	b
56	2PBC J0106.8+0637	2MASX J01064523+0638015	Sy2	16.729	6.642	4.46	2.46	5.50	1.0 ± 0.5	0.4 ± 0.1	0.0409	43.57	1.41	1 Y h a	
57	**2PBC J0107.8-1137**	2MFGC 829	G	16.970	-11.605	3.87	6.20	7.01	0.9 ± 0.6	0.4 ± 0.1	0.0466	43.68	1.26	3 N h a	

Table 2. continued.

	PBC name	ID	Type[a]	RA (deg)	Dec (deg)	Error radius (arcmin)	Offset (arcmin)	SNR	Flux[b] (erg cm^{-2} s^{-1})	Hardness ratio (R_{30-150}/R_{14-150})	Redshift	log L_{14-150}[c] (erg s^{-1})	Var	Flag 1[d] A B C D	Flag 2[e] I R F
58	**2PBC J0108.3-5826**	...	...	17.084	-58.437	4.83	...	4.82	0.6 ± 0.4	0.4 ± 0.2	...	...	1.45	3 N h	
59	2PBC J0108.8+1320	3C 033	Sy2	17.193	13.338	2.63	1.56	13.92	2.6 ± 1.5	0.46 ± 0.06	0.0596	44.33	1.45	1 Y h a	
60	**2PBC J0111.1-1616**	2MASX J01111430-1615547	Sy1	17.785	-16.266	4.24	1.48	5.99	1.0 ± 0.6	0.3 ± 0.1	0.0500	43.78	1.44	2 N h b	b
61	2PBC J0111.5-3804	NGC 424	Sy2	17.898	-38.079	2.92	1.58	11.44	2.0 ± 0.9	0.37 ± 0.06	0.0115	42.76	1.69	3 Y h a	b
62	2PBC J0113.8-1450	Mrk 1152	Sy1	18.451	-14.845	2.92	0.47	11.46	2.0 ± 0.6	0.33 ± 0.05	0.0522	44.12	1.69	3 Y h a	b
63	**2PBC J0113.7+1314**	Mrk 975	Sy1	18.471	13.224	3.80	2.92	7.21	1.3 ± 0.9	0.5 ± 0.1	0.0494	43.87	1.27	3 N h b	f
64	2PBC J0114.3-3240	IC 1663	Sy2	18.554	-32.676	3.28	1.97	9.31	1.6 ± 0.9	0.47 ± 0.08	0.0118	42.69	1.71	1 Y h a	
65	2PBC J0114.4-5524	NGC 454E	Sy2	18.603	-55.401	2.81	0.23	12.31	1.5 ± 0.9	0.43 ± 0.08	0.0120	42.68	2.16	1 Y h a	
66	**2PBC J0115.9-6248**	2MASX J01154060-6249246	Sy1	18.990	-62.802	4.78	2.34	4.90	0.6 ± 0.4	0.5 ± 0.2	0.0890	44.07	1.49	3 N h a	b
67	**2PBC J0116.3+3102**	KPG 28	GiP	19.095	31.043	4.68	4.06	5.09	0.8 ± 0.5	0.3 ± 0.1	...	...	1.87	1 N h b	
		NGC 452	GiP				1.79				0.0165	42.71			
68	**2PBC J0116.7-1236**	...	...	19.199	-12.616	4.58	...	5.27	0.8 ± 0.5	0.3 ± 0.2	...	...	1.60	3 N h	
69	2PBC J0117.1-7326	SMC X-1	HXB	19.303	-73.441	0.75	0.56	402.77	36.2 ± 0.2	0.089 ± 0.002	...	...	69.51	2 Y h a	I b
70	2PBC J0118.0+6517	3A 0114+650	HXB	19.511	65.295	1.11	0.18	94.69	14.7 ± 0.3	0.247 ± 0.006	...	...	15.24	3 Y l a	I b
71	**2PBC J0118.5+6343**	V* V635 Cas	HXB	19.633	63.731	1.46	0.56	46.24	5.5 ± 0.3	0.13 ± 0.01	...	...	11.57	2 N l a	I
72	**2PBC J0120.8-0829**	2MASS J01204752-0826297	Sy1	20.201	-8.490	4.98	2.93	5.05	0.7 ± 0.4	0.3 ± 0.1	0.2296	45.09	1.51	3 N h b	b
		FBQS J0120-0832	Sy2				4.85				0.2240	45.06			
73	**2PBC J0120.8-1444**	MCG-03-04-054	G	20.203	-14.747	4.88	1.62	5.21	0.9 ± 0.6	0.4 ± 0.1	0.0393	43.52	1.40	1 N h a	
74	2PBC J0122.3+5004	MCG+08-03-018	Sy2	20.629	50.068	3.95	0.95	6.75	1.2 ± 0.7	0.40 ± 0.10	0.0206	43.04	1.96	2 Y h a	
75	**2PBC J0122.7-7322**	...	...	20.698	-73.373	4.07	...	6.43	1.0 ± 0.5	0.07 ± 0.06	...	...	1.58	2 N h	
76	2PBC J0123.1+3421	1ES 0120+340	BZB	20.782	34.361	3.60	0.85	7.93	1.0 ± 0.6	0.27 ± 0.09	0.2720	45.46	2.04	3 Y h a	b
77	2PBC J0123.8-5847	RBS 0194	Sy1	20.931	-58.796	1.81	0.68	28.74	4.2 ± 0.3	0.38 ± 0.03	0.0470	44.34	2.07	3 Y h a	b
78	2PBC J0123.9-3503	NGC 526	Sy1	20.977	-35.064	1.89	0.12	26.35	5.3 ± 0.3	0.43 ± 0.02	0.0192	43.64	2.02	1 Y h a	I b
79	2PBC J0124.4+3346	NGC 0513	Sy2	21.121	33.780	3.35	1.22	8.97	2.2 ± 1.3	0.46 ± 0.06	0.0195	43.28	1.66	1 Y h a	
80	**2PBC J0126.0+1518**	RHS 10	Sy1	21.485	15.299	4.31	0.46	5.82	1.1 ± 0.7	0.4 ± 0.1	0.1110	44.51	1.30	1 N h b	
81	**2PBC J0127.5+1909**	Mrk 359	Sy1	21.887	19.165	4.65	0.85	5.14	0.9 ± 0.5	0.3 ± 0.1	0.0168	42.74	1.37	3 N h a	b
82	2PBC J0128.0-1848	RBS 0203	Sy1	22.021	-18.782	3.35	1.61	8.98	1.6 ± 0.9	0.42 ± 0.08	0.0430	43.82	2.14	1 Y h a	b
83	**2PBC J0128.5+1628**	MCG+03-04-043	GiP	22.126	16.481	4.08	1.91	6.39	1.2 ± 0.8	0.5 ± 0.1	0.0386	43.61	1.58	1 N h a	
84	**2PBC J0128.6-6038**	...	...	22.174	-60.647	5.01	...	4.99	0.5 ± 0.3	< 0.2	...	...	1.80	3 N h	
85	**2PBC J0129.7-4218**	PBCX J012951.6-421936	X	22.434	-42.316	4.10	2.72	6.35	0.7 ± 0.4	0.2 ± 0.1	...	...	1.42	2 N h a	
86	**2PBC J0130.2-8108**	...	...	22.574	-81.135	4.83	...	4.81	0.4 ± 0.2	< 0.2	...	...	1.52	3 N h	
87	2PBC J0132.0-3306	ESO 353- G 009	Sy2	23.020	-33.112	3.69	3.10	7.58	1.1 ± 0.6	0.40 ± 0.09	0.0165	42.84	1.46	3 Y h a	
88	**2PBC J0132.5-7426**	...	...	23.141	-74.445	4.77	...	4.92	0.4 ± 0.3	< 0.2	...	...	1.42	2 N h	
89	2PBC J0134.0-3630	NGC 612	Sy2	23.511	-36.491	2.14	0.99	20.65	4.7 ± 1.5	0.52 ± 0.03	0.0299	43.97	1.80	1 Y h a	
90	2PBC J0134.5-0428	RBS 0216	Sy1	23.692	-4.515	3.11	0.66	10.26	1.6 ± 0.9	0.42 ± 0.08	0.0790	44.39	1.78	1 Y h a	b
91	**2PBC J0136.5+2056**	3C 47	Sy1	24.139	20.934	4.74	2.51	4.97	0.5 ± 0.3	0.2 ± 0.2	0.4250	45.65	1.34	2 N h a	b
92	2PBC J0138.6-4000	ESO 297- G 018	Sy2	24.677	-40.006	1.66	1.07	34.83	5.8 ± 0.3	0.44 ± 0.02	0.0252	43.92	1.78	3 Y h a	I
93	2PBC J0140.4-5320	2MASX J01402676-5319389	G	25.092	-53.350	3.33	1.51	9.09	1.2 ± 0.7	0.34 ± 0.08	0.0716	44.19	1.58	3 Y h a	
94	2PBC J0146.3+6144	4U 0142+614	Psr	26.600	61.742	1.77	0.59	30.22	8.1 ± 2.6	0.65 ± 0.02	...	...	2.05	1 Y l a	I b
95	**2PBC J0147.0+6122**	V* V831 Cas	HXB	26.767	61.373	5.04	1.08	4.94	0.9 ± 0.5	0.4 ± 0.1	...	...	1.99	3 N l a	I b
96	**2PBC J0147.1-6609**	ESO 80-5	Sy1	26.799	-66.156	4.93	2.82	5.13	0.5 ± 0.3	0.4 ± 0.2	0.0270	42.93	1.32	3 N h a	b
97	**2PBC J0149.3-5017**	2MASX J01492228-5015073	G	27.338	-50.293	4.63	2.49	5.16	0.8 ± 0.5	0.5 ± 0.2	...	...	1.45	3 N h a	f
98	2PBC J0152.7-0327	MCG-01-05-047	Sy2	28.212	-3.448	2.53	0.45	14.87	2.6 ± 0.9	0.37 ± 0.05	0.0167	43.21	1.58	3 Y h a	I
99	**2PBC J0154.1-5034**	...	...	28.543	-50.570	4.67	...	5.10	0.8 ± 0.5	0.4 ± 0.2	...	...	1.49	1 N h	
100	2PBC J0154.7-2707	2MASS J01544031-2707012	QSO	28.670	-27.127	3.11	0.57	10.25	1.4 ± 0.8	0.29 ± 0.07	0.7900	46.70	1.77	3 Y h a	b
101	**2PBC J0155.4+0227**	1ES 0152+02.2	Sy1	28.851	2.450	4.62	1.24	5.18	0.8 ± 0.5	0.3 ± 0.1	0.0820	44.13	1.61	2 N h b	b
		PC 0152+0215	EmG				3.80				0.0800	44.10			
102	**2PBC J0156.1-0615**	...	...	29.036	-6.261	4.89	...	5.20	0.4 ± 0.2	< 0.3	...	...	1.52	3 N h	
103	**2PBC J0156.5-2040**	...	...	29.135	-20.667	4.89	...	5.19	0.7 ± 0.5	0.4 ± 0.2	...	...	1.67	1 N h	
104	**2PBC J0157.3+4715**	...	...	29.328	47.261	4.31	...	5.83	0.9 ± 0.5	0.4 ± 0.1	...	...	1.22	3 N h	
105	**2PBC J0200.1+2428**	MCG+04-05-034	Sy2	30.043	24.470	4.91	2.00	5.16	0.8 ± 0.6	0.5 ± 0.2	0.0164	42.70	1.54	1 N h a	
106	2PBC J0201.0-0648	NGC 788	Sy2	30.265	-6.814	1.54	0.70	40.89	7.1 ± 0.4	0.44 ± 0.02	0.0136	43.46	2.53	3 Y h a	I
107	2PBC J0202.9-2400	RBS 0273	Sy1	30.758	-24.025	4.15	0.71	6.22	0.9 ± 0.5	0.3 ± 0.1	0.1780	44.93	2.13	1 Y h a	b
108	**2PBC J0205.7-7147**	RBS 279	Sy1	31.432	-71.793	4.62	4.39	5.20	0.8 ± 0.5	0.4 ± 0.1	0.2600	45.19	1.75	1 N h a	b
109	2PBC J0206.3-0016	Mrk 1018	Sy1	31.554	-0.286	2.84	0.81	12.06	2.4 ± 1.4	0.46 ± 0.06	0.0426	44.01	2.46	1 Y h a	I b
110	2PBC J0207.0+2929	RHS 13	rad	31.768	29.506	3.51	0.58	8.29	1.4 ± 0.8	0.33 ± 0.07	0.1100	44.66	1.53	1 Y h a	b
111	**2PBC J0207.2+1515**	V* TT Ari	No*	31.806	15.263	4.79	5.26	4.88	0.5 ± 0.3	0.3 ± 0.2	...	...	1.51	1 N h a	b
112	**2PBC J0207.9-7425**	RX J0209.6-7427	X	31.990	-74.426	4.40	6.78	5.63	0.4 ± 0.2	< 0.2	...	...	1.31	2 N h a	
113	**2PBC J0208.6-1737**	...	...	32.158	-17.625	4.17	...	6.17	1.0 ± 0.6	0.4 ± 0.1	...	...	1.55	3 N h	
114	2PBC J0209.4-1010	NGC 835	Sy2	32.360	-10.153	4.33	1.12	5.78	1.1 ± 0.7	0.6 ± 0.2	0.0123	42.58	1.75	3 Y h a	
		NGC 833	LIN				1.83				0.0130	42.63			

Table 2. continued.

	PBC name	ID	Type[a]	RA (deg)	Dec (deg)	Error radius (arcmin)	Offset (arcmin)	SNR	Flux[b] (erg cm^{-2} s^{-1})	Hardness ratio (R_{30-150}/R_{14-150})	Redshift	log L_{14-150}[c] (erg s^{-1})	Var	Flag 1[d] A B C D	Flag 2[e] I R F
115	2PBC J0209.4+5226	LEDA 138501	Sy1	32.369	52.454	2.05	1.46	22.42	4.7 ± 0.3	0.39 ± 0.03	0.0492	44.42	1.64	3 Y h a	I b
116	**2PBC J0211.1-4942**	ESO 197-27	Sy2	32.791	-49.715	4.52	2.97	5.39	0.6 ± 0.4	0.5 ± 0.2	0.0465	43.49	1.66	3 N h b	
117	**2PBC J0214.0+5148**	1RXS J021417.8+514457	BZB	33.506	51.807	4.82	4.36	4.83	0.6 ± 0.3	0.2 ± 0.1	0.0490	43.54	1.64	3 N h a	b
118	**2PBC J0214.7-6431**	RBS 0295	Sy1	33.661	-64.514	4.53	0.74	5.37	0.5 ± 0.3	0.4 ± 0.1	0.0740	43.88	1.77	1 N h b	b
119	2PBC J0214.5-0044	Mrk 590	Sy1	33.669	-0.758	3.72	1.83	7.48	1.2 ± 0.7	0.4 ± 0.1	0.0265	43.28	2.03	1 Y h a	b
120	**2PBC J0215.6-1300**	3C 62	Sy2	33.904	-13.005	4.44	0.77	5.54	1.0 ± 0.6	0.5 ± 0.2	0.1470	44.73	1.50	3 N h a	
121	2PBC J0216.1+5124	2MASX J02162987+5126246	Sy2	34.057	51.423	3.49	2.07	8.37	1.7 ± 0.9	0.41 ± 0.08	0.0288	43.50	1.65	3 Y h a	I
122	**2PBC J0217.0-7250**	...	...	34.274	-72.844	4.85	...	5.27	0.7 ± 0.4	0.4 ± 0.1	...	...	1.46	3 N h	
123	2PBC J0217.4+7349	1ES 0212+735	BZQ	34.325	73.823	2.60	0.91	14.17	3.0 ± 1.7	0.50 ± 0.05	2.3670	47.91	1.60	1 Y h a	I f F
124	**2PBC J0223.4+4549**	V Zw 232	GrG	35.853	45.831	4.24	1.74	6.00	1.1 ± 0.7	0.4 ± 0.1	...	...	2.00	1 N h a	
125	**2PBC J0224.9-2316**	RBS 314	QSO	36.237	-23.270	4.46	3.63	5.51	0.9 ± 0.5	0.4 ± 0.1	0.2322	45.15	1.32	3 N h a	b
126	2PBC J0225.0+1848	RBS 315	BLA	36.252	18.793	2.75	1.21	12.79	3.0 ± 1.7	0.53 ± 0.06	2.6900	48.04	1.35	3 Y h a	b
127	2PBC J0225.4-6314	FRL 296	Sy1	36.344	-63.246	3.83	1.98	7.12	0.9 ± 0.5	0.4 ± 0.1	0.0598	43.86	1.65	1 Y h a	b
128	2PBC J0226.7-2819	2MASX J02262568-2820588	Sy1	36.631	-28.338	3.70	1.41	7.55	1.2 ± 0.7	0.43 ± 0.09	0.0600	44.02	2.18	3 Y h a	
129	**2PBC J0228.1+1832**	...	...	37.045	18.538	4.80	...	4.87	0.9 ± 0.5	0.3 ± 0.1	...	...	1.46	3 N h	
130	2PBC J0228.2+3119	Mrk 1040	Sy1	37.055	31.323	1.76	0.77	30.71	5.7 ± 0.3	0.35 ± 0.02	0.0163	43.53	1.74	3 Y h a	I b
131	2PBC J0231.9-3640	IC 1816	Sy2	37.954	-36.673	3.08	0.45	10.40	1.8 ± 1.0	0.45 ± 0.07	0.0170	43.07	1.45	1 Y h a	
132	2PBC J0232.7+2018	1ES 0229+200	BZB	38.192	20.310	2.91	1.44	11.53	2.0 ± 1.1	0.38 ± 0.06	0.1396	45.02	1.87	3 Y h a	b
133	2PBC J0234.3+3227	NGC 0973	Sy2	38.558	32.499	2.83	1.36	12.11	2.5 ± 1.5	0.48 ± 0.06	0.0150	43.10	1.87	1 Y h a	I
134	2PBC J0234.7-0846	NGC 985	Sy1	38.686	-8.778	2.40	1.79	16.47	2.6 ± 0.5	0.37 ± 0.05	0.0430	44.05	1.57	3 Y h a	I b
135	2PBC J0235.3-2935	ESO 416-G002	Sy1	38.829	-29.603	3.03	1.17	10.71	2.1 ± 1.2	0.50 ± 0.07	0.0591	44.22	1.69	1 Y h a	b
136	2PBC J0238.2-5211	RBS 0335	Sy1	39.588	-52.205	2.70	0.76	13.23	2.2 ± 1.2	0.44 ± 0.05	0.0452	44.01	1.72	1 Y h a	b
137	**2PBC J0238.3-6116**	IRAS F02374-6130	G	39.594	-61.278	4.07	2.56	6.42	0.9 ± 0.5	0.5 ± 0.1	...	...	1.65	3 N h a	F
138	2PBC J0238.8-4038	RBS 0339	Sy1	39.712	-40.653	3.28	0.62	9.33	1.3 ± 0.7	0.34 ± 0.07	0.0617	44.09	1.62	1 Y h a	b
139	2PBC J0240.6+6114	GT 0236+610	HXB	40.178	61.237	2.55	1.40	14.71	2.8 ± 1.6	0.45 ± 0.05	...	...	1.76	3 Y l a	I b F
140	2PBC J0241.2-0814	NGC 1052	Sy2	40.294	-8.226	2.63	2.27	13.85	2.7 ± 1.6	0.51 ± 0.06	0.0049	42.15	1.70	1 Y h a	I
141	2PBC J0241.5+0709	1ES 0238+069	Sy1	40.385	7.188	3.56	0.63	8.08	1.5 ± 0.8	0.37 ± 0.08	0.0272	43.40	1.81	3 Y h a	b
142	**2PBC J0242.3+0533**	2MASX J02421465+0530361	Sy1	40.584	5.553	4.63	2.94	5.18	0.7 ± 0.5	0.4 ± 0.2	0.0690	43.88	1.63	1 N h a	I b
143	2PBC J0242.7-0000	NGC 1068	Sy2	40.671	-0.017	2.58	0.20	14.34	2.7 ± 0.5	0.33 ± 0.05	0.0037	41.92	1.92	3 Y h a	I b ?
144	**2PBC J0243.9+5323**	...	...	40.993	53.396	4.24	...	6.00	0.7 ± 0.5	0.2 ± 0.1	...	...	1.32	2 N h	
145	**2PBC J0244.8-5816**	BZBJ0244-5819	BZB	41.207	-58.283	4.74	3.15	4.97	0.4 ± 0.2	0.2 ± 0.2	0.2650	44.97	1.61	3 N h b	b
146	2PBC J0245.0+6228	1ES 0241+622	Sy1	41.230	62.488	1.53	1.22	41.73	7.9 ± 0.4	0.42 ± 0.02	0.0445	44.56	2.55	3 Y l a	I b
147	2PBC J0245.3+1045	2MASX J02451349+1047230	BZU	41.340	10.745	3.51	3.31	8.30	1.5 ± 0.9	0.5 ± 0.1	0.0770	44.31	1.43	1 Y h a	f
148	2PBC J0248.9+2627	2MASX J02485937+2630391	Sy2	42.234	26.472	3.58	2.44	8.00	2.3 ± 1.4	0.52 ± 0.08	0.0597	44.27	1.35	1 Y h a	
149	**2PBC J0250.3+4645**	2MASX J02502722+4647295	G	42.584	46.766	3.65	1.94	7.73	1.7 ± 1.0	0.44 ± 0.08	...	...	1.63	1 N h a	
150	2PBC J0250.8+5442	2MFGC 2280	Sy2	42.711	54.702	2.93	1.14	11.39	2.1 ± 1.2	0.45 ± 0.06	0.0150	43.02	1.79	1 Y l a	I
151	**2PBC J0251.6-6800**	...	...	42.904	-68.004	4.85	...	5.27	0.4 ± 0.3	0.2 ± 0.2	...	...	1.41	3 N h	
152	2PBC J0251.6-1640	NGC 1125	Sy2	42.931	-16.647	4.84	0.77	4.80	1.5 ± 1.0	0.50 ± 0.09	0.0110	42.62	1.75	1 Y h a	
153	2PBC J0252.4-0832	MCG-02-08-014	Sy2	43.087	-8.531	2.94	1.33	11.31	2.0 ± 0.8	0.33 ± 0.06	0.0167	43.10	1.57	3 Y h a	I
154	**2PBC J0252.3+4309**	...	...	43.094	43.162	4.40	...	5.63	1.2 ± 0.7	0.4 ± 0.1	...	...	1.67	3 N h	
155	2PBC J0255.2-0011	NGC 1142	Sy2	43.813	-0.190	1.52	0.80	42.28	8.7 ± 0.4	0.46 ± 0.02	0.0288	44.21	2.49	3 Y h a	I
156	2PBC J0256.1+1925	XY Ari	DQ*	44.036	19.435	2.33	0.39	17.44	2.9 ± 0.5	0.27 ± 0.04	...	...	1.56	2 Y h a	I
157	2PBC J0256.3-3211	ESO 417- G 006	Sy2	44.115	-32.185	2.40	1.28	16.43	2.5 ± 0.8	0.40 ± 0.05	0.0163	43.17	1.53	3 Y h a	
158	**2PBC J0258.9+1335**	ACO 401	ClG	44.740	13.584	3.96	0.16	6.72	0.4 ± 0.2	< 0.2	0.0748	43.86	1.14	2 N h a	b
159	**2PBC J0300.0-1047**	MCG-02-08-038	Sy1	45.018	-10.791	4.13	2.35	6.27	1.0 ± 0.6	0.4 ± 0.1	0.0320	43.36	1.70	3 N h b	
		KOS 025738.9-110122	AGN				2.07				0.0330	43.39			
160	2PBC J0300.2+1627	RHS 17	Sy1	45.032	16.527	3.70	1.41	7.57	1.5 ± 0.9	0.38 ± 0.08	0.0350	43.64	1.47	2 Y h a	b
161	**2PBC J0302.6+2828**	...	...	45.658	28.471	4.98	...	5.04	0.6 ± 0.4	0.2 ± 0.1	...	...	1.74	2 N h	
162	2PBC J0303.8-0107	NGC 1194	Sy1	45.958	-1.117	2.41	0.82	16.31	3.0 ± 1.3	0.45 ± 0.05	0.0133	43.07	1.68	3 Y h a	I
163	**2PBC J0305.2-1739**	...	...	46.315	-17.653	5.02	...	4.97	0.3 ± 0.2	0.3 ± 0.2	...	...	1.77	3 N h	
164	**2PBC J0307.8-7249**	ESO 31-8	Sy1	46.957	-72.821	4.01	1.30	6.59	0.9 ± 0.5	0.4 ± 0.1	0.0279	43.20	1.42	3 N h a	f
165	**2PBC J0310.9+3239**	2MASX J03104435+3239296	Sy1	47.736	32.651	4.69	2.69	5.07	0.9 ± 0.5	0.2 ± 0.1	0.1270	44.59	1.76	3 N h a	b
166	2PBC J0311.3-2046	RBS 0392	Sy1	47.819	-20.785	3.05	0.92	10.61	2.2 ± 1.2	0.41 ± 0.05	0.0660	44.36	1.78	3 Y h a	b
167	**2PBC J0311.4-7649**	PKS 0312-77	BZQ	47.853	-76.822	3.98	3.07	6.68	0.7 ± 0.5	0.4 ± 0.1	0.2230	45.04	1.47	3 N h a	b
168	**2PBC J0311.9+5029**	IRAS 03084+5017	IR	47.995	50.487	4.67	0.65	5.10	1.1 ± 0.6	0.4 ± 0.1	...	...	1.74	2 N h a	b
169	**2PBC J0313.1+4119**	2MASX J03130194+4120012	BZU	48.277	41.323	4.39	1.07	5.64	1.2 ± 0.7	0.4 ± 0.1	0.1360	44.73	1.78	3 N h a	I b
170	**2PBC J0313.5-3506**	1RXS J031325.0-350636	Sy1	48.382	-35.110	5.05	1.38	4.93	0.5 ± 0.3	0.3 ± 0.1	0.1140	44.26	1.65	3 N h b	b
171	**2PBC J0315.9-1906**	6dFGS gJ031552.1-190644	SyG	48.993	-19.102	4.70	1.61	5.05	0.8 ± 0.5	0.4 ± 0.2	0.0670	43.91	1.22	1 N h a	
172	**2PBC J0317.1+1545**	...	...	49.293	15.754	4.62	...	5.19	0.5 ± 0.3	0.3 ± 0.2	...	...	1.88	1 N h	
173	**2PBC J0317.2+0116**	...	...	49.301	1.268	4.33	...	5.79	1.1 ± 0.6	0.4 ± 0.1	...	...	1.91	3 N h	
174	2PBC J0318.2+6829	2MASX J03181899+6829322	Sy1	49.541	68.479	2.84	1.17	12.02	2.0 ± 0.5	0.36 ± 0.05	0.0901	44.62	1.76	1 Y h a	I

Table 2. continued.

	PBC name	ID	Type[a]	RA (deg)	Dec (deg)	Error radius (arcmin)	Offset (arcmin)	SNR	Flux[b] (erg cm^{-2} s^{-1})	Hardness ratio (R_{30-150}/R_{14-150})	Redshift	log L_{14-150}[c] (erg s^{-1})	Var	Flag 1[d] A B C D	Flag 2[e] I R F
175	2PBC J0319.7+4129	NGC 1275	BZU	49.951	41.501	1.45	0.63	47.14	5.7 ± 0.3	0.16 ± 0.01	0.0175	43.61	2.46	2 Y h a	I b F
176	2PBC J0324.7+3409	1H 0323+342	Sy1	51.186	34.177	3.15	0.74	10.02	2.4 ± 1.3	0.43 ± 0.06	0.0629	44.34	2.46	1 Y h a	I b F
177	2PBC J0324.7-0300	NGC 1320	Sy2	51.236	-3.080	3.61	2.97	7.87	1.5 ± 0.9	0.41 ± 0.09	0.0092	42.45	1.36	1 Y h a	f
178	**2PBC J0325.0-1223**	MCG-02-09-040	Sy2	51.298	-12.354	4.36	0.55	5.71	1.1 ± 0.6	0.3 ± 0.1	0.0147	42.71	1.18	3 N h b	
		[VV2003c] J032504.9-1218	Sy2				3.49				0.0100	42.37			
179	2PBC J0325.1+4042	LEDA 097012	G	51.326	40.707	3.23	1.09	9.57	2.2 ± 1.2	0.41 ± 0.06	0.0477	44.07	1.89	1 Y h a	
180	**2PBC J0325.6-0820**	1RXS J032540.0-081442	X	51.408	-8.335	4.98	5.43	5.05	0.7 ± 0.4	0.3 ± 0.1	...	...	1.70	2 N l b	b
181	**2PBC J0328.7-2843**	PKS 0326-288	rG	52.182	-28.727	4.57	2.28	5.29	0.9 ± 0.6	0.4 ± 0.1	0.1080	44.42	1.08	1 N h a	
182	2PBC J0331.1+4353	GK Per	CV*	52.810	43.907	1.47	0.50	45.63	6.8 ± 0.3	0.19 ± 0.01	...	...	15.12	2 Y h a	I b
183	**2PBC J0333.3+3717**	IGR J03334+3718	Sy1	53.322	37.282	3.35	1.30	9.00	2.1 ± 1.2	0.34 ± 0.06	0.0547	44.17	1.57	3 N h a	I b
184	2PBC J0333.5-3608	NGC 1365	Sy1	53.381	-36.143	1.78	1.08	29.75	5.6 ± 0.3	0.40 ± 0.02	0.0055	42.58	2.07	3 Y h a	I
185	2PBC J0334.2-1514	RHS 23	Sy1	53.585	-15.244	3.42	1.34	8.65	1.3 ± 0.7	0.35 ± 0.09	0.0351	43.56	1.71	1 Y h a	b
186	2PBC J0334.9+5310	EXO 0331+530	HXB	53.756	53.175	0.73	0.27	461.33	46.1 ± 0.2	0.089 ± 0.002	...	...	35.02	2 Y l a	I
187	2PBC J0336.5+3219	NRAO 140	BZQ	54.129	32.305	2.57	0.23	14.54	3.3 ± 1.5	0.46 ± 0.05	1.2585	47.39	1.64	3 Y h a	b ?
188	**2PBC J0339.2-1742**	1RXS J033913.4-173553	X	54.820	-17.701	5.04	6.19	4.94	0.5 ± 0.3	0.2 ± 0.2	0.0655	43.70	1.83	3 N l b	b
189	2PBC J0342.0-2114	RBS 0462	Sy1	55.533	-21.256	2.13	1.45	20.83	3.8 ± 0.6	0.45 ± 0.03	0.0144	43.25	1.58	3 Y h a	I b
190	2PBC J0345.3-3932	2MASX J03451250-3934293	Sy1	56.316	-39.569	3.87	0.77	7.01	1.0 ± 0.6	0.34 ± 0.09	0.0430	43.66	1.52	1 Y h a	
191	**2PBC J0347.0-3025**	1RXS J034704.9-302409	Sy1	56.764	-30.425	4.52	1.66	5.38	0.7 ± 0.4	0.4 ± 0.1	0.0950	44.20	1.57	3 N h a	b
192	2PBC J0349.4-1158	RBS 476	BZB	57.369	-11.969	3.14	1.84	10.06	1.6 ± 0.9	0.37 ± 0.07	0.1880	45.21	1.42	3 Y h a	b
193	2PBC J0350.5-5021	ESO 201-IG 004	G	57.636	-50.349	3.22	3.15	9.61	1.8 ± 1.0	0.45 ± 0.06	...	...	1.73	1 Y h a	
194	2PBC J0351.6-4030	RBS 0482	Sy1	57.922	-40.486	3.90	1.12	6.91	0.9 ± 0.5	0.3 ± 0.1	0.0582	43.87	1.26	1 Y h a	b
195	2PBC J0353.3-6830	RHS 24	BLA	58.246	-68.528	3.17	3.00	9.89	1.0 ± 0.6	0.22 ± 0.07	0.0870	44.31	1.61	3 Y h a	I
196	2PBC J0353.5+3713	2MASX J03534246+3714077	G	58.402	37.206	3.80	2.12	7.22	1.7 ± 1.0	0.45 ± 0.08	0.0189	43.14	1.75	1 Y h a	
197	2PBC J0354.0+0250	RBS 0489	Sy1	58.522	2.844	3.73	1.64	7.45	1.3 ± 0.7	0.37 ± 0.10	0.0360	43.59	1.77	1 Y h a	b
198	2PBC J0355.3+3102	X Per	HXB	58.844	31.049	0.82	0.20	271.06	55.6 ± 0.3	0.381 ± 0.002	...	...	3.98	3 Y h a	I b
199	2PBC J0356.6-6252	2MASX J03561995-6251391	AG?	59.063	-62.881	3.91	1.33	6.88	1.0 ± 0.6	0.4 ± 0.1	...	...	1.72	3 Y h a	
200	2PBC J0356.9-4040	2MASX J03565655-4041453	G	59.228	-40.695	3.01	0.32	10.88	1.7 ± 1.0	0.45 ± 0.07	0.0747	44.36	1.48	1 Y h a	
201	**2PBC J0358.7+1024**	3C 098	Sy2	59.678	10.402	5.07	3.45	4.90	0.7 ± 0.4	0.2 ± 0.2	0.0304	43.17	1.63	3 N h a	I
202	**2PBC J0359.0-3017**	2MASX J03590885-3018102	GiC	59.768	-30.286	4.43	1.38	5.56	0.9 ± 0.6	0.4 ± 0.1	0.0938	44.29	1.66	3 N h a	
203	2PBC J0359.5+5058	4C 50.11	Q?	59.884	50.988	3.12	1.51	10.21	1.7 ± 1.0	0.43 ± 0.08	1.5100	47.31	1.87	1 Y l a	f
204	2PBC J0402.4-1803	ESO 549-G 049	Sy1	60.613	-18.055	2.84	0.56	12.04	2.4 ± 1.4	0.50 ± 0.06	0.0262	43.57	2.04	1 Y h a	
205	2PBC J0402.8+0157	MCG+00-11-007	Sy2	60.710	1.991	3.82	1.59	7.15	1.0 ± 0.6	0.4 ± 0.1	0.0127	42.56	1.66	1 Y h a	
206	2PBC J0405.6-1308	RX J0405.5-1308	BZQ	61.396	-13.143	3.50	0.42	8.34	1.6 ± 0.9	0.48 ± 0.09	0.5710	46.28	1.74	3 Y h a	b F
207	2PBC J0407.2+0341	3C 105	Sy2	61.817	3.695	2.63	0.72	13.84	2.7 ± 0.9	0.38 ± 0.05	0.0890	44.72	1.74	1 Y h a	I
208	**2PBC J0407.6-6116**	ESO 118-4	IG	61.901	-61.272	4.97	5.16	5.05	0.6 ± 0.4	0.4 ± 0.2	0.0483	43.51	1.44	1 N h b	
209	2PBC J0407.9-1210	RBS 0511	BZU	61.959	-12.211	3.87	1.13	7.00	1.2 ± 0.7	0.41 ± 0.10	0.5740	46.23	1.89	3 Y h a	b
210	2PBC J0414.9-0755	1E 0412-0803	Sy1	63.741	-7.927	2.77	1.30	12.65	1.8 ± 0.6	0.28 ± 0.05	0.0379	43.78	1.61	3 Y h a	b
211	2PBC J0418.3+3801	3C 111	Sy1	64.586	38.019	1.46	0.46	46.35	10.6 ± 0.3	0.42 ± 0.01	0.0485	44.76	2.63	3 Y h a	I b F
212	2PBC J0419.7-5456	NGC 1566	Sy1	64.997	-54.929	3.12	0.54	10.19	1.8 ± 1.1	0.50 ± 0.07	0.0049	41.99	1.64	3 Y h a	b
213	2PBC J0422.4-5613	ESO 157- G 023	Sy2	65.612	-56.228	3.17	0.39	9.91	1.5 ± 0.8	0.47 ± 0.08	0.0432	43.80	1.71	1 Y h a	
214	2PBC J0423.6+0406	2MASX J04234080+0408017	Sy2	65.922	4.125	2.93	0.53	11.41	2.2 ± 0.8	0.33 ± 0.06	0.0461	44.03	1.54	3 Y h a	I
215	**2PBC J0425.7-1945**	V* IW Eri	CV*	66.426	-19.756	4.41	3.05	5.62	0.5 ± 1.7	< 0.1	...	...	1.78	2 N h b	b
216	2PBC J0425.9-5712	RBS 0542	QSO	66.502	-57.200	2.27	0.06	18.31	1.7 ± 0.5	0.27 ± 0.05	0.1040	44.71	2.01	3 Y h a	b
217	**2PBC J0429.7-6703**	1RXS J042948.9-670314	X	67.427	-67.063	4.51	0.82	5.41	0.7 ± 0.4	0.4 ± 0.2	...	...	1.42	3 N h b	b
218	**2PBC J0429.8-2109**	6dFGS gJ042938.3-210944	AGN	67.471	-21.154	4.56	3.50	5.30	0.7 ± 0.5	0.4 ± 0.2	0.0703	43.92	1.98	3 N h b	f
219	2PBC J0430.4-5334	RBS 0547	Sy1	67.585	-53.620	4.68	2.93	5.08	0.5 ± 0.4	0.3 ± 0.2	0.0397	43.28	1.63	3 Y h a	b
220	2PBC J0431.1-6126	ABELL 3266	ClG	67.823	-61.428	3.08	1.46	10.40	0.6 ± 0.3	< 0.09	0.0594	43.75	1.46	2 Y h a	
221	2PBC J0433.1+0521	3C 120	BZU	68.307	5.360	1.63	0.71	36.26	8.9 ± 0.4	0.41 ± 0.02	0.0331	44.35	1.62	1 Y h a	I b
222	2PBC J0436.3-1021	Mrk 618	Sy1	69.096	-10.371	3.43	0.37	8.63	1.6 ± 0.9	0.41 ± 0.08	0.0362	43.69	1.17	1 Y h a	b
223	2PBC J0437.8-4713	RBS 0560	Sy1	69.434	-47.206	3.96	2.99	6.74	0.8 ± 0.5	0.3 ± 0.1	0.0520	43.72	1.48	3 Y h a	b
224	2PBC J0438.2-1047	MCG -02-12-050	Sy1	69.566	-10.800	3.28	0.46	9.30	1.7 ± 1.0	0.46 ± 0.09	0.0359	43.69	1.44	1 Y h a	b
225	**2PBC J0440.2-5937**	ESO 118-33	Sy2	70.055	-59.710	4.28	2.41	5.89	1.0 ± 0.6	0.36 ± 0.10	0.0577	43.89	1.51	1 N h b	f
226	**2PBC J0440.6-6507**	...	...	70.169	-65.126	4.63	...	5.18	0.7 ± 0.4	0.3 ± 0.1	...	...	1.18	3 N h	
227	**2PBC J0440.8+2739**	1RXS J044046.9+273948	X	70.221	27.651	4.46	1.54	5.51	1.3 ± 0.8	0.4 ± 0.1	...	...	1.80	3 N h b	b
228	2PBC J0440.9+4432	RX J0440.9+4431	HXB	70.236	44.550	3.39	1.27	8.79	2.0 ± 1.1	0.37 ± 0.06	...	...	1.75	1 Y l a	f
229	2PBC J0441.3-2707	RBS 0572	Sy1	70.343	-27.099	4.20	2.38	6.09	0.9 ± 0.6	0.5 ± 0.1	0.0835	44.19	1.40	1 Y h a	b
230	**2PBC J0441.9-0824**	2MASX J04415408-0826339	Sy1	70.402	-8.384	4.79	5.58	4.89	0.7 ± 0.4	0.3 ± 0.2	0.0410	43.42	1.74	1 N h b	b
231	2PBC J0443.7+2858	UGC 3142	Sy1	70.950	28.974	2.58	0.27	14.34	4.0 ± 1.0	0.43 ± 0.04	0.0218	43.63	1.99	1 Y h a	I
232	2PBC J0444.0+2814	2MASX J04440903+2813003	Sy2	71.012	28.227	2.33	1.49	17.42	5.0 ± 1.4	0.46 ± 0.03	0.0113	43.15	2.35	1 Y h a	
233	2PBC J0444.7-2810	RX J0444.6-2810	Sy2	71.132	-28.178	3.11	1.53	10.22	1.7 ± 1.0	0.44 ± 0.07	0.1470	44.98	1.79	3 Y h a	f
234	**2PBC J0446.2+1827**	MCG+03-13-001	Sy2	71.571	18.464	4.26	2.99	5.93	1.6 ± 1.0	0.40 ± 0.09	0.0155	42.94	1.80	1 N h b	

Table 2. continued.

	PBC name	ID	Type[a]	RA (deg)	Dec (deg)	Error radius (arcmin)	Offset (arcmin)	SNR	Flux[b] (erg cm^{-2} s^{-1})	Hardness ratio (R_{30-150}/R_{14-150})	Redshift	log L_{14-150}[c] (erg s^{-1})	Var	Flag 1[d] A B C D	Flag 2[e] I R F
235	**2PBC J0448.8-5741**	ESO 119-8	Sy2	72.218	-57.700	4.77	2.50	4.92	0.9 ± 0.6	0.6 ± 0.2	0.0232	43.03	1.62	1 N h b	
236	**2PBC J0449.7+4503**	4U 0446+44	ClG	72.447	45.062	4.64	3.63	5.14	0.5 ± 2.5	< 0.1	0.0210	42.72	1.59	2 N l a	
237	**2PBC J0451.1-6948**	PBCX J045106.7-694802	X	72.790	-69.801	2.23	0.24	19.03	2.8 ± 0.3	0.26 ± 0.03	...	...	2.10	2 N h a	
238	2PBC J0451.6-0347	MCG -01-13-025	Sy1	72.894	-3.801	3.25	1.77	9.47	2.2 ± 1.2	0.48 ± 0.07	0.0130	42.91	1.49	1 Y h a	b
239	2PBC J0451.7-5811	RBS 0594	Sy1	72.926	-58.196	2.91	0.84	11.51	1.9 ± 1.0	0.43 ± 0.06	0.0910	44.58	2.09	3 Y h a	b
240	2PBC J0452.0+4931	RX J0452.0+4932	Sy1	73.002	49.539	2.11	0.79	21.07	5.2 ± 0.5	0.41 ± 0.03	0.0290	43.99	2.10	3 Y l a	I b
241	2PBC J0453.3+0404	2MASX J04532576+0403416	Sy2	73.326	4.071	3.42	1.95	8.66	2.1 ± 1.1	0.31 ± 0.06	0.0296	43.63	1.87	1 Y h a	I
242	**2PBC J0455.3+1737**	...	...	73.834	17.633	4.83	...	4.82	0.9 ± 0.5	0.2 ± 0.1	...	...	1.36	2 N h	
243	2PBC J0455.9-7532	ESO 033- G 002	Sy2	73.941	-75.537	2.73	0.89	12.97	1.6 ± 0.6	0.35 ± 0.06	0.0184	43.10	1.58	3 Y h a	I b
244	2PBC J0457.0+4525	1RXS J045707.4+452751	X	74.283	45.442	3.04	1.32	10.68	2.5 ± 0.8	0.31 ± 0.05	...	...	1.73	3 Y l a	b
245	**2PBC J0459.8+2705**	4C 27.14	rad	74.963	27.087	3.80	1.37	7.21	1.9 ± 1.1	0.46 ± 0.09	...	...	1.75	1 N h a	
246	2PBC J0500.7-7041	IGR J05007-7047	HXB	75.244	-70.690	2.71	3.36	13.14	1.5 ± 0.5	0.16 ± 0.05	...	...	1.92	2 Y h a	I
247	2PBC J0502.3+0327	1E 0459.5+0327	Sy1	75.578	3.523	4.13	2.47	6.26	1.3 ± 0.8	0.4 ± 0.1	0.0159	42.88	1.60	1 Y h a	b
248	2PBC J0502.4+2443	V* V1062 Tau	No*	75.630	24.752	3.19	0.85	9.81	1.8 ± 0.9	0.11 ± 0.06	...	...	1.69	3 Y h a	I
249	2PBC J0503.0+2300	1RXS J050258.5+225949	Sy1	75.736	23.032	4.11	2.09	6.31	2.0 ± 1.1	0.35 ± 0.07	0.0577	44.19	1.51	3 Y h a	b
250	**2PBC J0504.2-7343**	IGR J05053-7343	gam	76.129	-73.733	4.26	3.51	5.95	0.8 ± 0.4	0.4 ± 0.1	...	...	1.66	1 N h b	I
		1RXS J050434.2-734902	X				5.05				...	...			
251	**2PBC J0505.4-6734**	...	...	76.357	-67.579	4.78	...	4.91	0.7 ± 0.4	0.2 ± 0.1	...	...	1.52	3 N h	
252	2PBC J0505.7-2351	2MASX J05054575-2351139	Sy2	76.444	-23.864	1.81	0.61	28.97	5.6 ± 0.6	0.46 ± 0.02	0.0350	44.19	1.54	1 Y h a	I f
253	2PBC J0506.6-1935	1RXS J050648.5-193651	Sy1	76.696	-19.674	3.74	3.58	7.43	1.2 ± 0.8	0.40 ± 0.10	0.0900	44.39	2.08	3 Y h b	b
254	2PBC J0508.1+1724	2MASX J05081967+1721483	Sy2	77.065	17.370	3.80	1.02	7.21	1.9 ± 1.1	0.32 ± 0.08	0.0177	43.13	1.81	3 Y h a	b
255	2PBC J0510.8+1629	4U 0517+17	Sy1	77.692	16.493	1.88	0.38	26.63	7.0 ± 0.5	0.40 ± 0.02	0.0178	43.70	2.10	1 Y h a	I b
256	**2PBC J0512.0-1831**	ESO 553-22	AGN	78.011	-18.517	4.67	1.81	5.09	0.8 ± 0.5	0.5 ± 0.2	0.0421	43.50	1.62	1 N h a	
257	2PBC J0514.1-4002	1H 0512-401	LXB	78.539	-40.047	1.58	0.58	38.84	3.6 ± 0.3	0.18 ± 0.02	...	...	2.46	2 Y h a	I b
258	**2PBC J0515.3+1856**	...	...	78.837	18.938	4.13	...	6.27	1.7 ± 1.0	0.44 ± 0.10	...	...	1.73	3 N h	
259	2PBC J0516.1-0009	Mrk 1095	Sy1	79.049	-0.156	1.93	0.33	25.20	5.9 ± 0.5	0.37 ± 0.02	0.0336	44.19	1.33	3 Y h a	I
260	**2PBC J0516.3+1927**	...	...	79.078	19.464	4.39	...	5.66	1.6 ± 1.0	0.4 ± 0.1	...	...	1.50	1 N h	
261	2PBC J0516.4-1034	MCG-02-14-009	Sy1	79.114	-10.531	3.94	2.35	6.78	1.0 ± 0.6	0.2 ± 0.1	0.0280	43.25	1.40	2 Y h a	b
262	2PBC J0519.4-3240	ESO 362- G 018	Sy1	79.888	-32.666	1.90	0.67	26.11	4.4 ± 0.5	0.44 ± 0.03	0.0126	43.20	1.66	1 Y h a	I b
263	2PBC J0519.8-4546	PICTOR A	Sy1	79.953	-45.772	2.08	0.44	21.74	3.3 ± 0.6	0.42 ± 0.03	0.0342	43.95	1.48	3 Y h a	I b
264	2PBC J0520.4-7157	LMC X-2	LXB	80.062	-71.945	2.12	1.63	20.91	1.0 ± 0.6	< 0.04	...	...	1.68	2 Y h a	b
265	**2PBC J0520.8-2522**	2MASX J05210136-2521450	Sy2	80.208	-25.368	4.86	2.61	5.25	0.9 ± 0.5	0.3 ± 0.1	0.0434	43.58	1.48	3 N h a	f
266	2PBC J0523.0-3626	RBS 0644	BZU	80.746	-36.459	2.38	0.23	16.74	2.6 ± 0.8	0.43 ± 0.04	0.0553	44.27	1.82	1 Y h a	b F
267	2PBC J0524.1-1211	LEDA 17233	Sy1	81.049	-12.192	3.21	1.99	9.71	2.3 ± 0.7	0.38 ± 0.05	0.0491	44.11	1.21	3 Y h a	
268	2PBC J0525.4-4559	PKS 0524-460	BZQ	81.307	-45.988	3.06	3.37	10.55	1.7 ± 1.0	0.55 ± 0.08	1.4790	47.17	1.35	1 Y h a	f
269	2PBC J0525.6+2413	RX J0525.3+2413	CV*	81.331	24.243	3.67	1.24	7.66	2.1 ± 1.2	0.29 ± 0.07	...	...	1.63	1 Y h a	b
270	**2PBC J0526.2-2119**	...	...	81.560	-21.328	4.50	...	5.43	0.9 ± 0.5	0.4 ± 0.1	...	...	1.59	3 N h	
271	2PBC J0529.3-3249	TV Col	DQ*	82.348	-32.823	1.48	0.53	44.87	5.5 ± 0.2	0.19 ± 0.01	...	...	2.23	2 Y h a	I b
272	**2PBC J0529.8-6602**	GSC 08891-00213	HXB	82.462	-66.041	4.82	5.74	4.84	0.8 ± 0.4	< 0.10	...	...	2.03	2 N l b	I
		1RXS J053043.4-655846	gam				6.48				...	...			
273	2PBC J0530.9+1333	PKS 0528+134	BZQ	82.755	13.562	4.18	2.12	6.13	1.8 ± 1.2	0.5 ± 0.1	2.0700	47.45	1.57	1 Y h a	b F
274	**2PBC J0532.7+1346**	1RXS J053257.3+134508	X	83.197	13.778	4.69	2.88	5.05	0.8 ± 0.5	0.4 ± 0.2	...	...	1.85	3 N h b	b
275	2PBC J0532.7-6621	LMC X-4	HXB	83.198	-66.367	0.82	0.32	269.22	28.4 ± 0.2	0.158 ± 0.003	...	...	64.63	3 Y h a	I
276	**2PBC J0533.8-1320**	...	...	83.468	-13.345	4.19	...	6.12	1.5 ± 0.9	0.5 ± 0.1	...	...	1.65	1 N h	
277	2PBC J0534.5+2201	Crab	Psr	83.635	22.013	0.58	0.13	4324.97	2106.6 ± 0.5	0.3691 ± 0.0001	...	...	1.97	1 Y h a	I F
278	2PBC J0534.7-5800	TW Pic	DQ*	83.700	-58.006	2.46	1.35	15.76	1.4 ± 0.5	0.16 ± 0.05	...	...	1.74	2 Y h a	I b
279	**2PBC J0535.1-0522**	Trapezium Cluster	Cl*	83.794	-5.372	4.64	1.70	5.15	0.4 ± 1.3	< 0.2	...	...	1.62	2 N h a	b
280	**2PBC J0535.6+4011**	IRAS 05320+4009	IR	83.909	40.189	4.90	1.12	5.17	1.1 ± 0.7	0.5 ± 0.2	...	...	1.62	1 N l a	b
281	**2PBC J0537.7+2106**	...	...	84.425	21.107	4.18	...	6.13	1.9 ± 1.1	0.17 ± 0.06	...	...	2.30	2 N h	
282	2PBC J0538.9+2618	1A 0535+262	HXB	84.724	26.318	0.94	0.20	159.46	36.1 ± 0.4	0.229 ± 0.003	...	...	28.58	3 Y l a	I b
283	2PBC J0538.9-6404	LMC X-3	HXB	84.731	-64.073	2.40	0.56	16.45	2.1 ± 0.3	0.37 ± 0.04	...	...	2.92	1 Y h a	b
284	2PBC J0538.9-4406	PKS 0537-441	BZB	84.751	-44.105	4.37	2.09	5.70	1.0 ± 0.7	0.4 ± 0.1	0.8960	46.56	1.74	1 Y h a	b F
285	2PBC J0539.8-6943	LMC X-1	HXB	84.888	-69.703	2.02	2.44	23.15	2.8 ± 0.3	0.27 ± 0.03	...	...	2.53	2 Y h a	I
286	2PBC J0540.0-6921	PSR B0540-69.3	Psr	84.934	-69.386	1.98	3.69	23.89	3.7 ± 0.6	0.44 ± 0.03	...	...	2.02	3 Y h a	I
287	2PBC J0539.8-2839	PKS 0537-286	BZQ	84.952	-28.645	2.66	1.76	13.62	2.7 ± 1.6	0.50 ± 0.05	3.1040	48.10	1.47	3 Y h a	b F
288	2PBC J0541.4-6825	XMMU J054134.7-682550	HXB	85.381	-68.406	1.75	1.48	31.13	2.7 ± 0.3	0.07 ± 0.02	...	...	9.46	2 Y h a	
289	2PBC J0542.7+6052	BY Cam	AM*	85.736	60.849	2.21	1.11	19.33	2.7 ± 0.5	0.21 ± 0.03	...	...	1.70	3 Y h a	I b
290	2PBC J0543.4-4102	TX Col	DQ*	85.827	-41.029	2.80	0.36	12.34	1.2 ± 0.6	0.10 ± 0.06	...	...	1.69	2 Y h a	b
291	2PBC J0543.6-2738	MCG -05-14-012	Sy1	85.888	-27.634	2.89	1.01	11.67	1.9 ± 1.0	0.41 ± 0.06	0.0099	42.62	1.50	3 Y h a	f
292	**2PBC J0543.9-4325**	PBCX J054400.2-432526	X	85.990	-43.420	4.61	0.53	5.21	0.8 ± 0.5	0.4 ± 0.1	...	...	1.61	1 N h a	
293	2PBC J0544.3+5905	2MASX J05442257+5907361	Sy2	86.083	59.134	2.80	1.11	12.35	2.7 ± 1.6	0.50 ± 0.06	...	...	1.22	1 Y h a	

Table 2. continued.

	PBC name	ID	Type[a]	RA (deg)	Dec (deg)	Error radius (arcmin)	Offset (arcmin)	SNR	Flux[b] (erg cm^{-2} s^{-1})	Hardness ratio (R_{30-150}/R_{14-150})	Redshift	log L_{14-150}[c] (erg s^{-1})	Var	Flag 1[d] A B C D	Flag 2[e] I R F
294	**2PBC J0545.1+6102**	...	...	86.281	61.038	5.07	...	4.89	0.6 ± 0.3	0.2 ± 0.2	...	...	1.49	3 N h	
295	**2PBC J0547.3+5040**	2MASX J05471492+5038251	G	86.848	50.667	3.45	2.10	8.54	1.5 ± 0.9	0.35 ± 0.08	0.0366	43.68	1.49	3 N h a	
296	2PBC J0550.7-3215	PKS 0548-322	BZB	87.675	-32.276	2.29	0.40	18.01	2.6 ± 0.5	0.35 ± 0.04	0.0689	44.49	1.79	3 Y h a	b
297	**2PBC J0550.7-2304**	1RXS J055040.0-231112	X	87.677	-23.078	4.01	6.51	6.59	1.1 ± 0.7	0.5 ± 0.1	...	...	1.64	3 N l b	b
298	2PBC J0552.1+5927	1RXS J055229.5+592842	Sy1	88.023	59.457	3.34	3.30	9.02	1.5 ± 0.8	0.34 ± 0.08	0.0500	43.94	1.14	1 Y h a	b
299	2PBC J0552.1-0727	NGC 2110	Sy2	88.040	-7.463	1.05	0.58	109.33	25.9 ± 0.4	0.449 ± 0.006	0.0075	43.51	5.21	1 Y h a	I f
300	2PBC J0554.8+4626	4U 0558+46	Sy1	88.717	46.447	1.38	0.53	53.22	11.1 ± 0.3	0.39 ± 0.01	0.0204	44.02	2.69	3 Y h a	I b
301	2PBC J0555.9+3948	OA 198	BZU	88.919	39.761	4.86	3.65	5.25	1.2 ± 0.7	0.4 ± 0.1	2.3630	47.68	1.41	1 Y h a	f
302	2PBC J0558.0+5353	V405 Aur	DQ*	89.494	53.893	2.13	0.49	20.76	3.5 ± 0.3	0.20 ± 0.03	...	...	1.60	2 Y h a	b
303	2PBC J0558.0-3821	H 0557-385	Sy1	89.521	-38.356	2.14	1.45	20.56	3.1 ± 0.3	0.30 ± 0.03	0.0339	43.91	1.55	3 Y h a	I b
304	**2PBC J0559.7-1930**	...	...	89.947	-19.513	4.75	...	4.95	0.7 ± 0.4	0.5 ± 0.2	...	...	1.34	1 N h	
305	2PBC J0559.6-5028	1ES 0558-504	Sy1	89.951	-50.445	3.17	0.20	9.90	1.2 ± 0.7	0.38 ± 0.08	0.1370	44.80	1.37	1 Y h a	b
306	**2PBC J0600.7+0008**	...	...	90.178	0.134	4.91	...	5.17	1.0 ± 0.6	0.2 ± 0.1	...	...	1.23	2 N h	
307	**2PBC J0600.8-2611**	1RXS J060105.8-261111	X	90.214	-26.193	4.77	3.27	4.92	0.7 ± 0.4	0.3 ± 0.1	...	...	1.60	3 N h b	b
308	2PBC J0602.0+2828	IRAS 05589+2828	Sy1	90.551	28.468	2.16	0.61	20.14	4.9 ± 0.5	0.34 ± 0.03	0.0330	44.09	1.98	3 Y l a	I b
309	**2PBC J0602.5+6522**	MCG+11-08-008	G	90.628	65.383	4.06	1.02	6.44	1.6 ± 1.0	0.53 ± 0.10	0.0154	42.93	1.51	3 N h a	
310	**2PBC J0605.8-2754**	1RXS J060548.1-275439	G	91.471	-27.915	3.87	1.13	7.00	1.0 ± 0.6	0.4 ± 0.1	...	...	1.83	3 N h a	b
311	2PBC J0606.0-8636	ESO 5-4	Sy2	91.795	-86.587	2.79	2.99	12.46	2.2 ± 1.3	0.49 ± 0.06	0.0063	42.30	1.40	3 Y h a	I
312	**2PBC J0608.0+5749**	...	...	92.020	57.822	4.91	...	5.16	1.0 ± 0.6	0.4 ± 0.2	...	...	1.42	1 N h	
313	**2PBC J0609.4-6243**	1RXS J061006.6-624311	X	92.363	-62.717	4.59	4.54	5.25	0.7 ± 0.5	0.4 ± 0.1	...	...	1.66	1 N l b	b
314	**2PBC J0611.9-4644**	...	...	92.989	-46.749	4.48	...	5.46	0.4 ± 0.8	< 0.2	...	...	1.46	2 N h	
315	2PBC J0615.7+7100	Mrk 3	Sy2	93.896	71.038	1.32	0.11	59.64	11.8 ± 0.3	0.48 ± 0.01	0.0134	43.67	2.56	1 Y h a	I b
316	2PBC J0617.1+0907	H 0614+091	LXB	94.282	9.125	0.93	0.73	163.48	41.5 ± 0.4	0.295 ± 0.003	...	...	9.88	2 Y l a	I b
317	**2PBC J0619.8-2324**	...	...	94.960	-23.413	4.82	...	4.84	0.5 ± 0.3	< 0.2	...	...	1.57	3 N h	
318	**2PBC J0620.8-2932**	...	...	95.220	-29.543	4.82	...	4.84	0.4 ± 0.2	0.1 ± 0.1	...	...	1.15	2 N h	
319	2PBC J0623.7-6435	RX J062308.0-643619	BZQ	95.842	-64.595	3.46	1.54	8.48	1.3 ± 0.8	0.50 ± 0.09	0.1290	44.73	1.72	1 Y h a	b
320	2PBC J0623.8-3212	ESO 426- G 002	Sy2	95.953	-32.244	2.52	1.72	15.08	2.4 ± 1.3	0.45 ± 0.06	0.0224	43.42	1.83	3 Y h a	
321	**2PBC J0623.8-6059**	ESO 121-IG 028	Sy2	95.977	-60.989	2.63	1.25	13.84	2.3 ± 1.1	0.43 ± 0.05	0.0411	43.95	1.50	3 N h b	I
322	**2PBC J0625.1+6450**	...	...	96.289	64.850	4.88	...	5.21	0.8 ± 0.5	0.4 ± 0.2	...	...	1.61	3 N h	
323	2PBC J0625.2+7336	IGR J06253+7334	CV*	96.296	73.605	2.55	0.79	14.75	1.4 ± 0.7	< 0.06	...	...	1.67	2 Y h a	I
324	**2PBC J0626.5-3701**	...	...	96.630	-37.025	4.10	...	6.34	1.2 ± 0.8	0.5 ± 0.1	...	...	1.22	1 N h	
325	**2PBC J0626.6+0728**	...	...	96.665	7.483	4.28	...	5.90	1.7 ± 1.1	0.5 ± 0.1	...	...	1.64	3 N l	
326	**2PBC J0629.2-2456**	...	...	97.306	-24.948	4.80	...	4.87	0.4 ± 2.1	< 0.2	...	...	1.41	3 N h	
327	2PBC J0630.9+6340	2MASX J06302561+6340411	Sy2	97.613	63.650	4.89	1.59	5.20	1.2 ± 0.7	0.39 ± 0.10	0.0413	43.67	1.17	2 Y h a	
328	2PBC J0632.6+6342	UGC 3478	BZQ	97.946	63.656	3.26	6.71	9.41	1.3 ± 0.7	0.36 ± 0.09	0.0124	42.65	1.69	3 Y h a	b
329	2PBC J0632.0-5403	1ES 0630-540	BLA	98.030	-54.025	3.82	3.21	7.15	0.8 ± 0.5	0.2 ± 0.1	0.1930	44.97	1.86	2 Y h a	
330	**2PBC J0634.9+2231**	CIZA J0635.0+2231	ClG	98.729	22.527	4.47	1.94	5.47	0.8 ± 0.5	0.3 ± 0.1	0.0680	43.98	1.71	2 N h a	b
331	**2PBC J0635.0-7441**	1RXS J063401.1-744629	X	98.760	-74.687	4.67	6.63	5.09	0.7 ± 0.5	0.4 ± 0.2	...	...	1.32	1 N l b	b
332	2PBC J0635.4-7514	PKS 0637-752	BZQ	99.081	-75.245	3.66	2.62	7.69	1.0 ± 0.6	0.4 ± 0.1	0.6510	46.30	1.66	1 Y h a	I b F
333	**2PBC J0636.4-2037**	2MASX J06363227-2034532	Sy2	99.101	-20.620	4.77	2.97	4.93	1.0 ± 0.7	0.5 ± 0.2	0.0551	43.86	1.59	1 N h b	
334	**2PBC J0636.6+3535**	1RXS J063631.9+353573	CV*	99.136	35.604	3.55	0.63	8.12	1.3 ± 0.7	0.22 ± 0.08	...	...	1.47	3 N h b	b
335	**2PBC J0640.1-4740**	...	...	100.041	-47.673	4.30	...	5.84	0.9 ± 0.6	0.4 ± 0.1	...	...	2.04	3 N h	
336	**2PBC J0640.2-1408**	...	...	100.062	-14.139	4.76	...	4.94	1.1 ± 0.8	0.6 ± 0.2	...	...	1.37	1 N h	
337	2PBC J0640.2-2554	ESO 490-IG026	Sy1	100.064	-25.908	2.27	1.16	18.38	3.2 ± 0.4	0.39 ± 0.04	0.0258	43.69	1.47	3 Y h a	I b
338	2PBC J0640.5-4322	2MASX J06403799-4321211	Sy2	100.153	-43.344	3.41	0.73	8.72	1.6 ± 1.0	0.52 ± 0.09	0.0610	44.13	1.43	3 Y h a	
339	2PBC J0641.3+3251	2MASX J06411806+3249313	G	100.332	32.824	2.66	0.34	13.55	3.1 ± 1.8	0.49 ± 0.05	0.0470	44.20	1.61	1 Y h a	
340	**2PBC J0650.3-3805**	6dFGS gJ065017.5-380514	G	102.583	-38.088	4.82	0.49	4.83	0.7 ± 0.4	0.4 ± 0.2	0.0300	43.18	1.50	3 N h a	b
341	2PBC J0652.1+7425	Mrk 6	Sy1	103.025	74.428	1.89	0.42	26.39	4.9 ± 0.4	0.40 ± 0.02	0.0186	43.58	1.74	3 Y h a	I b
342	**2PBC J0653.1-1227**	...	...	103.293	-12.461	4.79	...	4.89	0.8 ± 0.4	0.3 ± 0.2	...	...	1.35	1 N h	
343	**2PBC J0654.5+0703**	RX J0654.5+0703	X	103.631	7.058	4.76	0.70	4.94	1.0 ± 0.7	0.4 ± 0.2	...	...	1.40	1 N l a	b
344	**2PBC J0655.5-2752**	...	...	103.880	-27.869	5.05	...	4.93	0.5 ± 0.3	< 0.2	...	...	1.85	2 N h	
345	2PBC J0655.8+3958	UGC 03601	Sy1	103.952	40.003	2.77	0.25	12.65	2.6 ± 0.6	0.39 ± 0.05	0.0172	43.23	1.30	1 Y h a	b
346	**2PBC J0656.6-6534**	FRL 265	Sy1	104.170	-65.582	4.74	1.71	4.97	0.4 ± 0.3	0.3 ± 0.1	0.0304	42.95	1.50	1 N h b	b
347	**2PBC J0658.0-1746**	1RXS J065806.3-174427	X	104.518	-17.773	4.74	1.93	4.97	0.8 ± 0.4	0.2 ± 0.1	...	...	1.62	2 N h a	b
348	2PBC J0658.4-5553	RX J0658.4-5557	ClG	104.562	-55.906	4.63	2.97	5.17	0.3 ± 3.7	< 0.2	0.2960	45.16	1.53	1 Y h a	b
349	2PBC J0658.3-0712	2E 0655.8-0708	HXB	104.568	-7.218	1.22	0.45	73.02	9.3 ± 0.3	0.124 ± 0.009	...	...	26.34	2 Y l a	I f
350	**2PBC J0704.7+2627**	...	...	106.179	26.463	4.84	...	4.80	1.0 ± 0.7	0.6 ± 0.2	...	...	1.62	1 N h	
351	**2PBC J0706.7+0327**	1RXS J070648.8+032450	X	106.686	3.451	4.65	2.43	5.13	0.8 ± 0.4	0.2 ± 0.1	...	...	1.18	2 N l b	b
352	**2PBC J0707.4+6435**	2MASX J07071310+6435587	Sy1	106.867	64.591	4.57	1.68	5.28	1.1 ± 0.7	0.5 ± 0.1	0.0795	44.22	1.42	3 N h a	b
353	**2PBC J0708.8-4642**	6dFGS gJ070843.3-464249	G	107.213	-46.713	4.39	1.34	5.66	0.8 ± 0.5	0.4 ± 0.1	0.0469	43.61	1.80	3 N h a	
354	2PBC J0709.2-3601	PKS 0707-35	G	107.345	-36.029	2.95	1.80	11.28	2.1 ± 1.3	0.51 ± 0.07	0.1108	44.80	1.74	1 Y h a	

Table 2. continued.

	PBC name	ID	Type[a]	RA (deg)	Dec (deg)	Error radius (arcmin)	Offset (arcmin)	SNR	Flux[b] (erg cm^{-2} s^{-1})	Hardness ratio (R_{30-150}/R_{14-150})	Redshift	log L_{14-150}[c] (erg s^{-1})	Var	Flag 1[d] A B C D	Flag 2[e] I R F
355	**2PBC J0709.5-3538**	...	...	107.383	-35.643	4.78	...	4.91	0.8 ± 0.5	0.3 ± 0.1	...	...	1.70	1 N h	
356	2PBC J0710.2+5909	1H 0658+595	BZB	107.664	59.149	2.80	1.33	12.36	1.8 ± 0.5	0.29 ± 0.05	0.1250	44.89	1.75	2 Y h a	b F
357	**2PBC J0712.1+1540**	1RXS J071215.9+153930	X	108.042	15.670	4.73	1.55	4.99	0.9 ± 0.6	0.4 ± 0.2	0.1656	44.84	1.54	1 N h b	b
358	**2PBC J0713.6+3825**	FIRST J071340.2+382040	Sy1	108.402	38.419	4.77	4.52	4.92	0.6 ± 0.3	0.3 ± 0.2	0.1200	44.36	1.67	1 N l b	b
359	**2PBC J0714.0+3519**	MCG+06-16-028	Sy2	108.509	35.331	4.84	3.14	5.28	1.1 ± 0.7	0.5 ± 0.2	0.0157	42.79	1.35	3 N h b	f
360	**2PBC J0714.6-2521**	...	...	108.663	-25.355	4.17	...	6.15	0.9 ± 0.6	0.4 ± 0.1	...	...	1.99	3 N h	
361	**2PBC J0717.8-2156**	...	...	109.455	-21.944	4.57	...	5.28	0.6 ± 0.4	0.2 ± 0.1	...	...	1.55	2 N l	
362	2PBC J0717.9+4405	RX J0718.0+4405	Sy1	109.498	44.101	2.47	0.61	15.61	2.6 ± 0.5	0.37 ± 0.05	0.0610	44.36	1.57	3 Y h a	b
363	2PBC J0726.5-3553	LEDA 96373	Sy2	111.620	-35.895	3.17	0.83	9.91	2.1 ± 1.3	0.49 ± 0.07	0.0296	43.63	1.52	1 Y h a	I
364	2PBC J0726.6+3700	1RXS J072635.3+370006	QSO	111.659	37.001	4.33	0.58	5.77	1.1 ± 0.6	0.3 ± 0.1	0.1900	45.08	1.68	1 Y h a	b
365	2PBC J0727.3-2404	1RXS J072720.8-240629	Sy1	111.846	-24.119	2.83	0.79	12.10	1.6 ± 0.9	0.45 ± 0.09	0.1230	44.78	1.37	1 Y l a	f
366	2PBC J0728.9-2605	3A 0726-260	HXB	112.231	-26.092	2.28	1.02	18.10	2.1 ± 0.6	0.10 ± 0.04	...	...	2.81	2 Y l a	b
367	**2PBC J0729.2+4008**	2MASX J07290876+4008361	Sy1	112.302	40.140	4.80	0.77	4.87	1.0 ± 0.7	0.6 ± 0.2	0.0740	44.12	1.59	3 N h b	b
368	**2PBC J0730.4-1142**	PG 0727-11	BZQ	112.606	-11.713	4.51	2.22	5.40	1.0 ± 0.6	0.4 ± 0.1	1.5910	47.26	1.51	3 N l a	F
369	2PBC J0731.5+0955	BG CMi	DQ*	112.884	9.934	2.37	0.86	16.89	2.5 ± 0.9	0.17 ± 0.04	...	...	1.52	2 Y h a	
370	2PBC J0732.6-1331	SWIFT J0732.5-1331	CV*	113.154	-13.504	2.39	0.81	16.54	2.6 ± 0.7	0.24 ± 0.04	...	...	1.24	1 Y l a	I b
371	2PBC J0739.6-3143	SWIFT J0739.7-3144	Sy2	114.930	-31.726	2.44	1.64	15.92	2.3 ± 0.8	0.39 ± 0.05	0.0260	43.55	2.03	1 Y l a	
372	**2PBC J0741.7-6726**	...	...	115.426	-67.444	4.82	...	4.84	0.5 ± 0.3	0.2 ± 0.2	...	...	1.49	3 N h	
373	**2PBC J0742.0+8024**	3C 184.1	Sy1	115.514	80.412	4.65	2.90	5.13	0.8 ± 0.5	0.5 ± 0.2	0.1182	44.43	1.32	1 N h a	
374	2PBC J0742.4+4948	Mrk 79	Sy1	115.613	49.799	1.95	1.11	24.71	4.4 ± 0.4	0.40 ± 0.03	0.0220	43.68	1.68	1 Y h a	b
375	**2PBC J0743.0+6511**	Mrk 78	Sy1	115.751	65.185	4.33	1.99	5.79	1.0 ± 0.6	0.4 ± 0.1	0.0380	43.53	1.94	1 N h a	
376	2PBC J0743.1-2546	2MASX J07431472-2545501	Sy1	115.803	-25.767	2.72	0.49	13.07	2.2 ± 1.2	0.41 ± 0.06	0.0230	43.42	1.63	1 Y l a	b
377	**2PBC J0744.1+2915**	MCG+05-19-001	Sy2	116.053	29.261	3.13	1.14	10.13	1.8 ± 1.1	0.51 ± 0.09	0.0159	43.00	1.55	1 N h b	
		LEDA 93091	GiG				1.46				0.0158	43.00			
378	**2PBC J0744.7-2348**	...	...	116.195	-23.812	4.64	...	5.15	1.1 ± 0.6	0.4 ± 0.1	...	...	1.69	1 N l	
379	2PBC J0745.0-5258	V* V436 Car	DQ*	116.260	-52.965	3.80	0.94	7.23	0.6 ± 0.3	< 0.1	...	...	1.59	2 Y h a	b
380	**2PBC J0746.2-1610**	1RXS J074616.8-161127	X	116.566	-16.171	4.23	1.23	6.02	0.9 ± 0.5	< 0.1	...	...	1.59	2 N l a	b
381	2PBC J0746.4+2548	87GB 074322.5+255639	BZQ	116.609	25.812	2.31	0.33	17.74	4.5 ± 2.7	0.57 ± 0.04	2.9793	48.10	1.57	1 Y h a	f F
382	2PBC J0747.4+6055	Mrk 10	Sy1	116.890	60.927	3.16	0.68	9.95	1.7 ± 0.8	0.35 ± 0.06	0.0292	43.52	1.85	1 Y h a	b
383	2PBC J0747.5-1920	4U 0739-19	ClG	116.892	-19.326	3.35	1.97	9.00	0.9 ± 0.5	0.10 ± 0.08	0.1028	44.46	1.41	2 Y l a	b
384	**2PBC J0747.7-7326**	2MASX J07473839-7325533	G	116.945	-73.437	3.92	0.69	6.85	1.2 ± 0.7	0.44 ± 0.10	...	...	1.48	3 N h a	
385	2PBC J0748.6-6744	EXO 0748-676	LXB	117.146	-67.756	0.89	0.22	190.47	25.6 ± 0.3	0.340 ± 0.004	...	...	29.45	3 Y h a	I b
386	**2PBC J0749.2-8634**	1RXS J075044.0-863217	X	117.322	-86.576	4.81	2.59	4.86	0.7 ± 0.5	0.6 ± 0.2	...	...	1.42	1 N h b	b
387	**2PBC J0750.4+7237**	...	...	117.613	72.624	4.87	...	5.22	0.8 ± 0.5	0.4 ± 0.1	...	...	1.40	3 N h	
388	2PBC J0750.6+1231	OI +280	BZQ	117.666	12.521	3.96	2.97	6.71	1.5 ± 1.0	0.6 ± 0.1	0.8890	46.48	1.28	1 Y h a	F
389	**2PBC J0750.6+0320**	2MASX J07510082+0320401	Sy1	117.672	3.336	4.71	4.84	5.02	0.9 ± 0.5	0.4 ± 0.2	0.0989	44.34	1.50	3 N h a	
390	2PBC J0751.2+1445	SWIFT J0750.9+1439	DQ*	117.803	14.741	2.15	1.15	20.42	2.9 ± 0.5	0.18 ± 0.03	...	...	1.61	2 Y h a	b
391	**2PBC J0751.6+6450**	...	...	117.917	64.839	4.92	...	5.15	0.6 ± 0.4	0.5 ± 0.2	...	...	1.45	3 N h	
392	2PBC J0752.1+1935	2MASX J07521780+1935423	Sy1	118.064	19.598	4.05	0.61	6.47	1.5 ± 0.8	0.29 ± 0.08	0.1172	44.73	1.68	1 Y h a	f
393	2PBC J0752.9+4557	1RXS J075243.6+455653	Sy1	118.231	45.968	3.52	2.26	8.23	1.4 ± 0.9	0.51 ± 0.10	0.0600	44.08	1.45	1 Y h a	b
394	**2PBC J0756.4-4137**	2MASX J07561963-4137420	Sy2	119.102	-41.626	4.49	0.93	5.44	0.9 ± 0.6	0.4 ± 0.1	0.0210	42.93	1.73	2 N h a	I f
395	**2PBC J0757.9+0113**	...	...	119.498	1.227	4.96	...	5.08	1.0 ± 0.6	0.4 ± 0.1	...	...	1.44	1 N h	
396	2PBC J0759.7-3844	IGR J07597-3842	Sy1	119.932	-38.740	1.82	0.58	28.54	4.7 ± 0.4	0.38 ± 0.02	0.0400	44.24	1.91	3 Y l a	I
397	2PBC J0759.9+2324	MCG +04-19-017	Sy2	119.975	23.421	2.66	1.84	13.58	3.0 ± 1.6	0.46 ± 0.05	0.0296	43.77	1.50	1 Y h a	
398	2PBC J0800.2+2637	IC 486	Sy1	120.066	26.628	2.80	1.39	12.34	2.8 ± 1.5	0.45 ± 0.05	0.0272	43.66	1.87	1 Y h a	b
399	**2PBC J0800.5-4306**	...	...	120.145	-43.117	5.08	...	4.88	0.8 ± 0.5	0.4 ± 0.1	...	...	1.31	3 N h	
400	**2PBC J0801.2-4625**	1RXS J080114.6-462324	X	120.325	-46.418	4.94	1.79	5.10	0.7 ± 0.5	0.4 ± 0.1	...	...	1.31	1 N h a	I f
401	2PBC J0802.0-4946	ESO 209-12	Sy1	120.490	-49.781	2.73	0.14	12.97	2.2 ± 0.6	0.39 ± 0.05	0.0395	43.90	1.11	3 Y h a	I b
402	**2PBC J0803.4+0840**	...	...	120.859	8.680	4.04	...	6.49	1.4 ± 0.8	0.35 ± 0.09	...	...	1.61	3 N h	
403	2PBC J0804.0+0506	Mrk 1210	Sy2	121.020	5.111	1.99	0.29	23.87	5.0 ± 0.4	0.41 ± 0.03	0.0135	43.31	1.58	1 Y h a	f
404	**2PBC J0804.6-2748**	[CGI2005] 13	XB*	121.150	-27.804	4.37	3.55	5.70	0.7 ± 0.4	0.4 ± 0.2	...	...	1.71	3 N l b	b
405	**2PBC J0804.7+1048**	MCG+02-21-013	Sy2	121.151	10.763	4.17	2.63	6.15	1.7 ± 1.0	0.40 ± 0.08	0.0343	43.66	1.48	2 N h b	
406	2PBC J0805.4+6146	GB6 J0805+6144	BZQ	121.314	61.738	3.31	0.35	9.18	1.5 ± 0.9	0.48 ± 0.09	3.0400	47.78	1.67	1 Y h a	f F
407	2PBC J0811.3+7601	RBS 0693	Sy1	122.794	76.043	2.93	0.73	11.39	1.1 ± 0.6	0.26 ± 0.08	0.1000	44.48	1.23	3 Y h a	I b
408	**2PBC J0812.3-4003**	...	...	123.086	-40.051	4.80	...	4.86	0.9 ± 0.6	0.5 ± 0.2	...	...	1.93	3 N l	
409	**2PBC J0812.8+6233**	V* SU UMa	DN*	123.225	62.564	4.96	3.88	5.08	0.1 ± 0.1	< 0.7	...	...	1.34	2 N h a	b
410	2PBC J0814.4+0421	2MASX J08142529+0420324	Sy1	123.600	4.366	3.38	1.60	8.84	2.0 ± 1.2	0.43 ± 0.07	0.0330	43.70	1.29	1 Y h a	
411	**2PBC J0816.8+1800**	2MASX J08165108+1802496	Sy1	124.215	18.019	4.69	1.72	5.06	0.8 ± 0.5	0.3 ± 0.1	0.1580	44.76	1.34	3 N h b	b
412	**2PBC J0817.4-0733**	ACO 644	ClG	124.368	-7.563	4.67	3.16	5.10	0.4 ± 1.9	< 0.2	0.0704	43.73	1.44	2 N h a	b
413	2PBC J0818.1+0121	1RXS J081815.0+012215	Sy1	124.550	1.353	4.54	1.43	5.34	1.9 ± 1.1	0.52 ± 0.09	0.0800	44.45	1.53	3 Y h a	b
414	**2PBC J0818.5-1420**	1RXS J081820.4-142555	X	124.646	-14.345	4.97	6.30	5.07	0.7 ± 0.4	0.3 ± 0.2	...	...	1.43	3 N l b	b

Table 2. continued.

	PBC name	ID	Type[a]	RA (deg)	Dec (deg)	Error radius (arcmin)	Offset (arcmin)	SNR	Flux[b] (erg cm^{-2} s^{-1})	Hardness ratio (R_{30-150}/R_{14-150})	Redshift	log L_{14-150}[c] (erg s^{-1})	Var	Flag 1[d] A B C D	Flag 2[e] I R F
415	**2PBC J0818.9-2252**	2MASX J08185772-2252364	Sy1	124.731	-22.875	4.39	0.55	5.64	1.1 ± 0.7	0.5 ± 0.1	0.0350	43.50	1.64	1 N h a	b
416	**2PBC J0819.2-2508**	1RXS J081915.0-251106	X	124.816	-25.147	4.99	2.27	5.02	0.7 ± 0.4	0.2 ± 0.1	0.0055	41.67	1.50	3 N h b	b
417	**2PBC J0819.4+4524**	...	...	124.874	45.401	5.06	...	4.92	0.6 ± 0.3	0.2 ± 0.2	...	...	1.40	2 N h	
418	**2PBC J0820.4-2801**	1RXS J082033.6-280457	X	125.122	-28.032	4.23	3.17	6.01	1.0 ± 0.5	0.3 ± 0.1	...	...	1.49	2 N l a	b
419	2PBC J0823.0-0454	FAIRALL 0272	G	125.754	-4.932	2.28	0.14	18.20	3.8 ± 2.2	0.57 ± 0.05	0.0218	43.60	1.88	1 Y h a	
420	**2PBC J0825.4+7306**	V* Z Cam	CV*	126.364	73.111	4.98	1.01	5.05	0.5 ± 0.3	0.2 ± 0.2	...	...	1.27	2 N h a	b
421	2PBC J0826.3-7033	1ES 0826-703	X	126.573	-70.560	3.30	1.97	9.20	0.8 ± 0.5	0.1 ± 0.1	...	...	1.39	3 Y h a	b
422	**2PBC J0829.8+4154**	2MASX J08294266+4154366	Sy1	127.453	41.912	4.47	1.12	5.48	0.9 ± 0.5	0.4 ± 0.1	0.1260	44.55	1.81	1 N h b	b
423	**2PBC J0829.9-6725**	1RXS J083017.0-672520	X	127.485	-67.429	4.39	2.00	5.65	0.6 ± 0.4	0.2 ± 0.2	0.0347	43.25	1.38	3 N h b	b
424	2PBC J0832.6+3706	RBS 707	Sy1	128.143	37.131	2.96	1.80	11.21	1.7 ± 1.0	0.44 ± 0.07	0.0920	44.55	1.56	1 Y h a	b
425	**2PBC J0833.0+2842**	2MASX J08330461+2849225	Sy1	128.268	28.714	4.67	6.53	5.10	0.9 ± 0.6	0.5 ± 0.2	0.1742	44.84	1.77	3 N h b	
426	**2PBC J0834.5+0601**	2MASX J08342927+0603249	Sy1	128.633	6.033	4.43	1.58	5.57	1.2 ± 0.7	0.5 ± 0.1	0.1100	44.55	1.29	1 N h b	f
427	2PBC J0835.3-4511	Vela Pulsar	Psr	128.844	-45.183	1.18	0.49	79.29	14.9 ± 0.3	0.407 ± 0.008	...	...	2.00	3 Y l a	I F
428	2PBC J0838.3+4837	EI UMa	DN*	129.598	48.638	2.06	0.31	22.22	2.7 ± 0.3	0.23 ± 0.03	...	...	1.40	2 Y h a	b
429	2PBC J0838.4-3558	FAIRALL 1146	Sy1	129.635	-35.990	2.24	0.38	18.85	2.9 ± 0.4	0.32 ± 0.04	0.0317	43.83	1.95	3 Y l a	I b
430	**2PBC J0838.7+2612**	2MASX J08385930+2608129	EmG	129.688	26.216	4.68	5.81	5.08	1.0 ± 0.6	0.4 ± 0.1	0.0480	43.72	1.18	3 N h a	
431	2PBC J0838.6-4831	USNO-B1.0 0414-00125587	CV*	129.694	-48.530	3.34	0.59	9.03	1.7 ± 0.7	0.33 ± 0.06	...	...	1.83	1 Y l a	I
432	2PBC J0839.7-1214	3C 206	Sy1	129.939	-12.241	2.70	1.25	13.20	2.3 ± 0.7	0.39 ± 0.05	0.1978	45.42	1.24	1 Y h a	b
433	2PBC J0840.0+2948	4C 29.30	Sy2	130.020	29.789	4.10	1.78	6.35	1.5 ± 0.9	0.47 ± 0.09	0.0647	44.18	1.64	3 Y h a	
434	2PBC J0841.4+7053	S5 0836+71	BZQ	130.396	70.890	1.73	0.91	31.66	5.9 ± 1.1	0.51 ± 0.02	2.2180	48.13	1.64	1 Y h a	I b F
435	**2PBC J0842.2+0759**	1RXS J084206.6+075936	Sy1	130.528	7.982	3.93	0.65	6.81	1.5 ± 0.9	0.5 ± 0.1	0.1300	44.81	1.77	1 N h b	b
436	**2PBC J0843.6+3553**	2MASX J08434495+3549421	Sy2	130.894	35.844	4.45	2.32	5.52	1.1 ± 0.6	0.34 ± 0.09	0.0535	43.87	1.76	1 N h b	
437	2PBC J0845.2-3530	SWIFT J0845.0-3531	X	131.331	-35.514	3.22	0.50	9.64	1.3 ± 0.7	0.37 ± 0.10	...	...	1.53	1 Y l a	b
438	**2PBC J0845.3+1421**	2MASX J08451850+1420345	G	131.332	14.353	3.54	0.64	8.15	1.3 ± 0.7	0.30 ± 0.08	...	...	1.24	1 N h a	
439	**2PBC J0845.3-5227**	1RXS J084539.5-522556	X	131.348	-52.460	4.81	2.94	4.85	0.5 ± 0.3	< 0.2	...	...	1.68	3 N h b	b
440	**2PBC J0848.2+3443**	RBS 724	Sy1	132.052	34.728	4.77	6.34	4.92	0.4 ± 0.4	< 0.2	0.0640	43.60	1.64	2 N h a	b
441	**2PBC J0849.2-5544**	2MASX J08491503-5546075	Sy1	132.309	-55.743	4.84	1.55	5.28	0.7 ± 0.5	0.4 ± 0.1	0.0658	43.88	1.61	1 N h b	
442	**2PBC J0852.0+0750**	2E 0849.5+0805	Sy1	133.008	7.843	5.02	4.42	4.97	0.8 ± 0.5	0.4 ± 0.2	0.0630	43.86	1.39	3 N h a	b
443	**2PBC J0854.3-0826**	...	...	133.590	-8.435	4.66	...	5.11	0.8 ± 0.5	0.5 ± 0.2	...	...	1.52	1 N h	
444	2PBC J0855.6+7812	NGC 2655	LIN	133.882	78.204	3.80	1.20	7.23	1.3 ± 0.8	0.5 ± 0.1	0.0047	41.80	1.54	1 Y h a	f
445	**2PBC J0855.7+6423**	MCG+11-11-032	G	133.930	64.395	3.77	3.30	7.31	1.3 ± 0.8	0.42 ± 0.09	...	...	1.41	3 N h a	
446	**2PBC J0855.8-2855**	2MASX J08551746-2854218	G	133.941	-28.925	4.36	6.32	5.72	0.8 ± 0.5	0.4 ± 0.1	...	...	1.56	3 N h a	
447	2PBC J0855.9+0049	2MASX J08555426+0051110	Sy1	133.968	0.832	3.91	1.34	6.86	0.8 ± 0.5	0.3 ± 0.1	0.0523	43.74	1.19	3 Y h b	
		2MASX J08554766+0047390	Sy1				2.56				0.0417	43.54			
448	**2PBC J0859.5+4456**	...	...	134.888	44.948	4.53	...	5.36	0.7 ± 0.4	0.3 ± 0.1	...	...	1.49	2 N h	
449	**2PBC J0900.4-3335**	...	...	135.109	-33.590	5.03	...	4.95	0.7 ± 0.4	0.2 ± 0.1	...	...	2.10	3 N h	
450	2PBC J0902.1-4033	Vela X-1	HXB	135.528	-40.553	0.60	0.08	2342.09	356.5 ± 0.3	0.1446 ± 0.0002	...	...	98.55	2 Y l a	I b
451	2PBC J0902.2+6004	Mrk 18	Sy2	135.562	60.115	3.35	3.00	8.99	1.2 ± 0.8	0.6 ± 0.1	0.0109	42.49	1.70	1 Y h a	
452	2PBC J0902.6-6815	NGC 2788A	AGN	135.633	-68.229	2.96	0.55	11.22	1.7 ± 1.0	0.49 ± 0.08	0.0137	42.85	1.57	3 Y h a	I
453	2PBC J0902.6-4813	IGR J09026-4812	gam	135.683	-48.211	2.24	0.70	18.80	2.9 ± 1.4	0.46 ± 0.05	0.0390	44.00	1.74	3 Y l a	I
454	**2PBC J0902.9-7414**	...	...	135.727	-74.246	4.51	...	5.41	1.0 ± 0.7	0.7 ± 0.2	...	...	1.47	1 N h	
455	2PBC J0904.5+5535	2MASX J09043699+5536025	Sy1	136.156	55.584	3.50	0.99	8.33	1.0 ± 0.6	0.36 ± 0.09	0.0371	43.51	1.55	3 Y h a	
456	2PBC J0908.8-0940	4U 0900-09	ClG	137.216	-9.681	2.58	2.69	14.43	1.4 ± 0.7	< 0.06	0.0535	44.00	1.70	2 Y h a	
457	2PBC J0909.2+0350	1RXS J090915.6+035453	QSO	137.329	3.900	3.59	1.03	7.95	1.4 ± 0.9	0.5 ± 0.1	3.2000	47.89	1.49	1 Y h a	f
458	2PBC J0911.4+4528	2MASX J09112999+4528060	Sy2	137.880	45.480	3.08	0.81	10.42	1.7 ± 0.9	0.36 ± 0.06	0.0268	43.43	1.54	3 Y h a	
459	2PBC J0916.2-6218	SWIFT J0917.2-6221	Sy1	139.042	-62.318	2.46	0.40	15.73	2.4 ± 0.5	0.31 ± 0.04	0.0571	44.27	1.68	3 Y h a	I b
460	**2PBC J0917.2-6454**	2MASX J09172716-6456271	G	139.308	-64.916	4.47	2.06	5.48	0.9 ± 0.5	0.28 ± 0.10	...	...	1.63	3 N h a	b
461	2PBC J0918.4+1619	Mrk 704	Sy1	139.618	16.305	2.40	0.53	16.52	2.9 ± 0.5	0.36 ± 0.04	0.0292	43.75	1.64	3 Y h a	b
462	**2PBC J0918.8-4414**	...	...	139.716	-44.236	4.90	...	5.17	0.8 ± 0.6	0.4 ± 0.2	...	...	1.67	3 N l	
463	**2PBC J0919.6-0738**	6dFGS gJ091951.3-073542	Sy1	139.924	-7.634	5.00	3.31	5.01	0.8 ± 0.6	0.7 ± 0.3	0.1690	44.75	1.47	3 N h a	b
464	2PBC J0919.7+5523	RBS 0766	Sy1	139.938	55.401	4.08	2.83	6.39	1.0 ± 0.6	0.4 ± 0.1	0.1226	44.57	1.41	3 Y h a	b
465	2PBC J0919.9+3712	IC 2461	G	140.000	37.196	2.91	0.53	11.57	1.9 ± 1.1	0.40 ± 0.06	0.0075	42.38	1.50	1 Y h a	
466	2PBC J0920.4-5512	H 0918-549	LXB	140.113	-55.214	1.33	0.41	57.59	8.7 ± 0.3	0.32 ± 0.01	...	...	3.00	3 Y l a	I b
467	2PBC J0920.8-0803	MCG -01-24-012	Sy2	140.206	-8.058	2.08	0.80	21.71	4.5 ± 0.4	0.40 ± 0.03	0.0198	43.60	1.68	3 Y h a	I
468	**2PBC J0921.2-0821**	2MASX J09211095-0818184	AGN	140.300	-8.360	4.99	3.30	5.03	1.3 ± 0.7	0.37 ± 0.09	0.0648	44.12	1.76	1 N h b	
469	**2PBC J0922.1-6317**	V* V395 Car	LXB	140.549	-63.295	4.97	2.62	5.06	0.3 ± 0.1	< 0.2	...	...	1.79	2 N h a	b
470	**2PBC J0923.7-2134**	PKS 0921-213	BZU	140.944	-21.580	3.94	2.07	6.78	1.2 ± 0.7	0.4 ± 0.1	0.0530	43.88	1.53	1 N h a	b
471	2PBC J0923.7+2255	RBS 0770	Sy1	140.956	22.937	2.24	2.26	18.74	3.5 ± 1.3	0.47 ± 0.04	0.0326	43.92	1.38	1 Y h a	b
472	2PBC J0924.0-3141	1RXS J092418.0-314212	Sy1	141.003	-31.693	2.89	1.47	11.67	1.7 ± 1.0	0.30 ± 0.06	...	...	1.73	1 Y h a	
473	2PBC J0925.2+5216	Mrk 110	Sy1	141.306	52.277	1.74	0.58	31.35	5.0 ± 0.3	0.39 ± 0.02	0.0353	44.16	1.51	3 Y h a	I b
474	**2PBC J0925.6+6931**	IGR J09253+6929	gam	141.420	69.529	4.95	3.23	5.10	0.7 ± 0.4	0.3 ± 0.1	0.0390	43.37	1.33	3 N h b	I

Table 2. continued.

	PBC name	ID	Type[a]	RA (deg)	Dec (deg)	Error radius (arcmin)	Offset (arcmin)	SNR	Flux[b] (erg cm^{-2} s^{-1})	Hardness ratio (R_{30-150}/R_{14-150})	Redshift	log L_{14-150}[c] (erg s^{-1})	Var	Flag 1[d] A B C D	Flag 2[e] I R F
475	2PBC J0926.1+1245	Mrk 705	Sy1	141.527	12.743	3.17	0.94	9.90	1.8 ± 1.0	0.40 ± 0.07	0.0280	43.50	1.12	1 Y h a	b
476	2PBC J0927.1+2301	NGC 2885	Sy1	141.852	23.038	3.67	1.74	7.67	1.5 ± 1.0	0.5 ± 0.1	0.0250	43.31	1.34	1 Y h a	b
477	**2PBC J0927.8-6945**	PBCX J092752.4-694439	X	141.964	-69.756	3.81	1.33	7.17	0.8 ± 0.5	0.12 ± 0.09	...	...	1.54	2 N h a	
478	**2PBC J0928.5+4959**	...	...	142.130	49.995	4.96	...	5.08	0.5 ± 0.3	0.3 ± 0.2	...	...	1.52	1 N h	
479	**2PBC J0929.6+6231**	...	...	142.423	62.527	4.78	...	4.91	0.6 ± 0.4	0.4 ± 0.2	...	...	1.70	3 N h	
480	2PBC J0930.6+4954	RBS 0782	BZB	142.609	49.855	4.23	1.95	6.02	0.4 ± 0.2	0.2 ± 0.1	0.1880	44.71	1.52	2 Y h a	b
481	**2PBC J0931.3-5104**	...	...	142.828	-51.075	4.59	...	5.24	0.8 ± 0.5	0.4 ± 0.1	...	...	1.28	3 N l	
482	**2PBC J0933.9+3145**	...	...	143.477	31.757	4.99	...	5.03	0.7 ± 0.5	0.5 ± 0.2	...	...	1.37	1 N h	
483	2PBC J0934.7-2155	ESO 565-19	Sy2	143.682	-21.923	3.25	0.33	9.48	2.2 ± 1.4	0.56 ± 0.08	0.0157	43.09	1.52	1 Y h a	
484	**2PBC J0935.4+2616**	2MASX J09352707+2617093	Sy1	143.856	26.277	4.57	0.66	5.29	0.7 ± 0.4	0.4 ± 0.1	0.1100	44.36	1.42	1 N h b	b
485	**2PBC J0936.0-6551**	...	...	144.009	-65.853	4.26	...	5.95	1.0 ± 0.6	0.5 ± 0.1	...	...	1.36	3 N h	
486	**2PBC J0941.2-4525**	...	...	145.305	-45.418	4.91	...	5.16	0.5 ± 0.3	0.3 ± 0.2	...	...	1.50	2 N h	
487	**2PBC J0942.1+2342**	1RXS J094204.0+234106	G	145.541	23.705	4.08	1.81	6.41	1.1 ± 0.7	0.5 ± 0.1	0.0213	43.06	1.28	3 N h b	b
488	2PBC J0945.7-1419	NGC 2992	Sy1	146.418	-14.355	2.53	1.77	14.86	2.6 ± 1.5	0.45 ± 0.06	0.0077	42.52	1.68	1 Y h a	I b
489	**2PBC J0946.9+6315**	2MASS J09471552+6317165	QSO	146.738	63.257	4.99	2.78	5.02	0.4 ± 0.3	0.3 ± 0.2	0.4875	45.71	1.46	2 N h a	f
490	2PBC J0947.6-3056	MCG-05-23-016	Sy2	146.919	-30.931	1.07	1.07	104.44	17.2 ± 0.3	0.347 ± 0.007	0.0082	43.41	1.86	3 Y h a	I b
491	2PBC J0947.6+0725	3C 227	Sy1	146.924	7.426	3.04	0.85	10.69	1.7 ± 0.8	0.37 ± 0.07	0.0865	44.51	1.39	1 Y h a	
492	**2PBC J0948.9+0021**	RX J0948.8+0022	BZQ	147.229	0.351	4.91	1.51	5.17	1.2 ± 0.8	0.6 ± 0.2	0.5839	46.02	1.45	1 N h a	f F
493	2PBC J0949.2+4036	4C 40.24	BZQ	147.290	40.605	3.87	4.36	6.99	0.7 ± 0.4	0.4 ± 0.1	1.2520	46.97	1.67	1 Y h a	f
494	**2PBC J0950.0+7315**	4C 73.08	rG	147.508	73.253	3.78	1.38	7.27	1.2 ± 0.7	0.37 ± 0.09	0.0586	43.98	1.27	1 N h a	
495	2PBC J0952.1-0648	NGC 3035	Sy1	148.005	-6.818	3.02	1.79	10.76	1.7 ± 1.0	0.55 ± 0.10	0.0145	42.90	1.42	3 Y h a	b
496	**2PBC J0952.1-6234**	IGR J09523-6231	AGN	148.042	-62.582	4.26	4.01	5.95	1.1 ± 0.6	0.34 ± 0.10	0.2520	45.32	1.31	2 N h a	I
497	2PBC J0954.8+3724	IC 2515	Sy2	148.673	37.420	4.00	0.79	6.60	1.2 ± 0.8	0.5 ± 0.1	0.0193	42.99	1.30	3 Y h a	
498	2PBC J0955.1+6904	M81	LIN	148.887	69.066	3.32	0.04	9.12	1.0 ± 0.6	0.4 ± 0.1	0.0001	38.63	1.47	1 Y h a	b
499	**2PBC J0955.7+6941**	M 82	IG	148.944	69.695	4.20	0.98	6.10	0.5 ± 0.3	< 0.1	0.0007	39.86	1.37	2 N h a	b F
500	**2PBC J0957.6-4208**	1RXS J095750.4-420801	X	149.408	-42.145	3.94	2.40	6.79	0.8 ± 0.5	0.21 ± 0.10	...	...	1.51	2 N h b	b
501	2PBC J0959.4-2249	NGC 3081	Sy2	149.865	-22.822	1.71	0.52	32.67	7.3 ± 0.5	0.48 ± 0.02	0.0079	43.00	1.79	3 Y h a	I f
502	**2PBC J0959.6+1301**	NGC 3080	Sy1	149.902	13.028	4.76	4.81	4.93	0.7 ± 0.5	0.5 ± 0.2	0.0354	43.33	1.56	3 N h a	b
503	2PBC J0959.6-3113	2MASX J09594263-3112581	Sy1	149.908	-31.226	3.22	1.16	9.64	2.0 ± 1.1	0.40 ± 0.07	0.0370	43.80	1.68	3 Y h a	b
504	**2PBC J1001.8+2847**	3C 234.0	Sy1	150.458	28.789	4.51	0.18	5.41	0.6 ± 0.3	0.3 ± 0.2	0.1849	44.76	1.39	2 N h a	
505	2PBC J1002.0+5539	4C 55.19	Sy2	150.469	55.673	2.29	0.85	18.07	2.5 ± 0.6	0.43 ± 0.04	0.0037	41.89	1.65	1 Y h a	f
506	**2PBC J1002.3+0304**	...	...	150.576	3.077	4.70	...	5.05	0.7 ± 0.4	0.2 ± 0.1	...	...	1.54	2 N h	
507	**2PBC J1005.9-2303**	ESO 499-41	G	151.492	-23.050	3.71	0.62	7.50	1.2 ± 0.8	0.5 ± 0.1	0.0127	42.64	1.68	3 N h a	b
508	2PBC J1009.7-4248	SWIFT J1009.3-4250	Sy2	152.459	-42.814	2.45	0.34	15.84	3.2 ± 0.8	0.46 ± 0.04	0.0330	43.90	1.65	1 Y h a	I
509	2PBC J1009.7-5816	GRO J1008-57	HXB	152.466	-58.268	1.29	1.64	62.63	8.2 ± 0.3	0.22 ± 0.01	...	...	20.23	3 Y l a	I
510	2PBC J1010.9-5748	IGR J10109-5746	Sy*	152.748	-57.813	2.25	0.70	18.59	2.3 ± 0.4	0.18 ± 0.03	...	...	1.99	2 Y l a	I f
511	2PBC J1013.4-3559	ESO 374- G 044	Sy2	153.356	-35.970	3.57	1.35	8.03	1.4 ± 0.8	0.40 ± 0.09	0.0283	43.40	1.40	1 Y h a	
512	**2PBC J1017.2-0404**	2dFGRS TGN156Z174	G	154.301	-4.076	4.95	1.21	5.09	1.1 ± 0.7	0.5 ± 0.1	0.0408	43.60	1.25	1 N h a	f
513	**2PBC J1020.5-0235**	...	...	155.126	-2.589	4.34	...	5.76	1.1 ± 0.7	0.4 ± 0.1	...	...	1.16	1 N l	
514	2PBC J1021.8-0326	RBS 857	Sy1	155.407	-3.472	2.94	1.28	11.33	1.8 ± 1.0	0.39 ± 0.07	0.0409	43.83	1.01	3 Y h a	b
515	**2PBC J1022.0+5123**	RX J1022.2+5124 2	BLA	155.504	51.385	4.61	2.01	5.21	0.3 ± 0.2	< 0.2	0.1417	44.28	1.34	2 N h a	b
516	2PBC J1023.5+1951	NGC 3227	Sy1	155.875	19.862	1.30	0.21	61.42	10.3 ± 0.3	0.40 ± 0.01	0.0036	42.48	1.61	3 Y h a	I b
517	**2PBC J1024.6-2332**	ESO 500-34	Sy2	156.135	-23.525	3.70	1.76	7.55	1.2 ± 0.7	0.4 ± 0.1	0.0123	42.61	1.63	1 N h b	
518	**2PBC J1029.7-3822**	...	...	157.432	-38.370	4.51	...	5.41	0.7 ± 0.4	0.3 ± 0.2	...	...	1.44	1 N h	
519	**2PBC J1031.4-4200**	...	...	157.871	-42.016	3.92	...	6.85	1.1 ± 0.7	0.4 ± 0.1	...	...	1.61	3 N h	
520	2PBC J1031.8-3451	NGC 3281	Sy2	157.957	-34.854	1.59	0.47	38.07	7.7 ± 0.4	0.42 ± 0.02	0.0114	43.35	1.88	3 Y h a	I
521	2PBC J1031.8-1417	RBS 0880	QSO	157.965	-14.295	2.35	1.03	17.16	3.0 ± 0.6	0.38 ± 0.04	0.0860	44.75	1.48	3 Y h a	
522	**2PBC J1032.6-2837**	ESO 436-34	EmG	158.155	-28.627	4.32	1.87	5.81	1.1 ± 0.7	0.5 ± 0.1	0.0120	42.56	1.61	1 N h a	
523	**2PBC J1033.6+5253**	2MASX J10331570+5252182	G	158.408	52.886	4.22	3.36	6.04	0.5 ± 0.3	< 0.1	0.0653	43.76	1.23	3 N h a	
524	**2PBC J1034.2+7301**	...	...	158.565	73.028	4.80	...	4.87	0.7 ± 0.5	0.5 ± 0.2	...	...	1.18	1 N h	
525	**2PBC J1037.7-5649**	TYC 8609-1385-1	HXB	159.405	-56.822	2.76	1.42	12.73	1.5 ± 0.9	0.19 ± 0.06	...	...	2.27	3 N l b	I b
526	**2PBC J1037.9-5316**	...	...	159.485	-53.283	5.04	...	4.94	0.5 ± 0.4	0.3 ± 0.1	...	...	1.77	2 N l	
527	2PBC J1038.8-4947	SWIFT J1038.8-4942	Sy1	159.698	-49.777	2.93	0.51	11.37	2.3 ± 1.3	0.45 ± 0.06	0.0600	44.29	1.44	1 Y h a	I b
528	2PBC J1040.4-4624	IGR J10404-4625	Sy2	160.135	-46.414	2.92	1.82	11.47	2.3 ± 1.3	0.40 ± 0.06	0.0240	43.48	1.41	3 Y h a	I
529	**2PBC J1042.2+0043**	...	...	160.565	0.723	4.74	...	4.96	1.0 ± 0.6	0.4 ± 0.1	...	...	1.49	1 N h	
530	**2PBC J1043.4+1105**	SDSS J104326.47+110524.2	QSO	160.849	11.072	4.12	1.23	6.30	1.1 ± 0.7	0.41 ± 0.10	0.0475	43.78	1.51	1 N h b	
531	2PBC J1043.8+7025	MCG+12-10-067	Sy2	160.908	70.425	3.46	2.83	8.50	0.9 ± 0.6	0.4 ± 0.1	0.0332	43.38	1.39	1 Y h a	
532	2PBC J1044.1+8054	S5 1039+81	BZQ	161.060	80.927	3.86	1.00	7.03	0.8 ± 0.4	0.3 ± 0.1	1.2540	46.90	1.35	1 Y h a	b F
533	**2PBC J1044.8+3813**	...	...	161.201	38.148	4.49	...	5.44	1.0 ± 0.7	0.5 ± 0.1	...	...	1.50	1 N h	
534	**2PBC J1044.8-5942**	V* eta Car	V*	161.203	-59.702	4.48	2.14	5.47	0.6 ± 0.5	0.2 ± 0.1	...	...	1.55	2 N l a	I
535	**2PBC J1045.7-6027**	...	...	161.431	-60.465	4.41	...	5.60	0.9 ± 0.5	0.4 ± 0.1	...	...	1.54	3 N l	

Table 2. continued.

	PBC name	ID	Type[a]	RA (deg)	Dec (deg)	Error radius (arcmin)	Offset (arcmin)	SNR	Flux[b] (erg cm^{-2} s^{-1})	Hardness ratio (R_{30-150}/R_{14-150})	Redshift	log L_{14-150}[c] (erg s^{-1})	Var	Flag 1[d] A B C D	Flag 2[e] I R F
536	2PBC J1046.6+2557	UGC 05881	GiG	161.677	25.955	2.89	1.45	11.70	1.9 ± 0.7	0.37 ± 0.05	0.0204	43.25	1.67	1 Y h a	I
537	2PBC J1048.6-2508	NGC 3393	Sy2	162.113	-25.135	3.06	1.82	10.56	2.2 ± 1.4	0.54 ± 0.09	0.0125	42.88	1.37	1 Y h a	
538	**2PBC J1048.9-3901**	1RXS J104833.9-390238	X	162.235	-39.019	4.87	4.61	5.22	0.6 ± 0.4	0.4 ± 0.2	...	...	1.60	1 N l b	b
539	2PBC J1049.4+2258	Mrk 417	Sy2	162.362	22.974	2.39	1.09	16.58	2.9 ± 1.1	0.44 ± 0.04	0.0328	43.85	1.74	1 Y h a	
		PBCX J104912.3+225615	X				1.09				...	...			
540	**2PBC J1051.3-1703**	NGC 3431	G	162.848	-17.060	4.10	3.71	6.34	1.3 ± 0.9	0.5 ± 0.1	0.0175	42.95	1.55	1 N h a	
541	2PBC J1052.6+1037	2MASX J10523297+1036205	Sy1	163.149	10.618	4.17	0.99	6.16	1.2 ± 0.7	0.38 ± 0.09	0.0880	44.38	1.60	3 Y h a	
542	**2PBC J1053.4-3037**	...	...	163.362	-30.631	5.04	...	4.94	0.7 ± 0.4	0.2 ± 0.2	...	...	1.41	2 N h	
543	**2PBC J1059.9+6505**	2MASX J10594361+6504063	Sy2	164.952	65.077	3.35	0.74	9.00	0.8 ± 0.5	0.4 ± 0.1	0.0840	44.16	1.66	1 N h b	
544	2PBC J1101.0+1102	Mrk 728	Sy1	165.213	11.060	4.57	2.74	5.28	1.1 ± 0.8	0.6 ± 0.2	0.0360	43.48	1.25	1 Y h a	b
545	**2PBC J1101.2+7229**	4C 72.16	BZQ	165.302	72.498	4.26	5.04	5.94	1.1 ± 0.7	0.5 ± 0.1	1.4600	46.96	1.39	3 N h a	b
546	**2PBC J1103.4+3726**	2MASX J11034025+3729249	Sy1	165.866	37.447	4.46	3.58	5.49	0.7 ± 1.3	0.4 ± 0.2	0.0740	43.98	1.05	3 N h a	
547	2PBC J1103.6-2329	1H 1100-230	BZB	165.900	-23.478	3.21	0.90	9.67	1.3 ± 0.8	0.33 ± 0.09	0.1860	45.14	1.46	2 Y h a	b F
548	2PBC J1104.4+3813	Mrk 421	BZB	166.116	38.209	1.04	0.10	114.77	12.1 ± 0.2	0.238 ± 0.006	0.0300	44.40	20.06	2 Y h a	I b F
549	**2PBC J1105.8+5854**	1RXS J110537.4+585128	X	166.467	58.912	4.93	3.74	5.13	0.6 ± 0.4	0.4 ± 0.2	0.1915	44.81	1.38	3 N h b	b
550	2PBC J1106.4+7234	NGC 3516	Sy1	166.648	72.566	1.26	0.91	66.65	10.4 ± 0.3	0.42 ± 0.01	0.0088	43.25	1.84	3 Y h a	b
551	**2PBC J1107.2-4827**	...	...	166.803	-48.453	4.64	...	5.15	0.8 ± 0.6	0.4 ± 0.2	...	...	1.22	1 N h	
552	2PBC J1113.7+0930	Mrk 732	Sy1	168.395	9.544	3.43	4.47	8.62	1.5 ± 0.9	0.43 ± 0.09	0.0293	43.46	1.58	3 Y h a	b
553	**2PBC J1113.6+7942**	MCG +13-08-056	G	168.420	79.716	4.34	2.87	5.75	1.0 ± 0.6	0.5 ± 0.1	...	...	1.30	1 N h a	
554	**2PBC J1114.0+2024**	...	...	168.505	20.408	4.99	...	5.02	0.9 ± 0.6	0.5 ± 0.1	...	...	1.93	3 N h	
555	**2PBC J1115.3+5425**	MCG+09-19-015	GiC	168.832	54.433	4.68	2.75	5.08	0.7 ± 0.5	0.4 ± 0.1	...	...	1.42	1 N h a	
556	**2PBC J1117.2-2903**	QSO B1114-2846	Sy1	169.297	-29.089	4.07	3.27	6.43	0.6 ± 0.3	< 0.2	0.0704	43.87	1.24	2 N h b	b
557	2PBC J1117.9+4803	XTE J1118+480	LXB	169.547	48.043	3.98	0.37	6.68	0.6 ± 0.4	0.3 ± 0.1	...	...	3.31	1 Y h a	
558	2PBC J1118.4-5438	2MASS J11182121-5437286	IR	169.618	-54.636	3.56	1.23	8.07	1.5 ± 0.9	0.38 ± 0.08	...	...	1.48	1 Y h a	I
559	2PBC J1120.9-4316	H 1118-429	Sy1	170.213	-43.264	3.82	0.57	7.17	1.6 ± 0.9	0.40 ± 0.09	0.0567	44.09	1.43	3 Y h a	b
560	**2PBC J1120.9-6154**	2E 2448	HXB	170.242	-61.912	1.36	0.32	54.61	8.8 ± 0.3	0.178 ± 0.010	...	...	17.12	2 N l a	I
561	2PBC J1121.2-6037	Cen X-3	HXB	170.315	-60.621	0.69	0.12	696.75	70.8 ± 0.2	0.0483 ± 0.0009	...	...	86.24	2 Y l a	I b
562	**2PBC J1124.9-5919**	SNR G292.0+01.8	SNR	171.244	-59.319	4.26	5.26	5.95	0.6 ± 0.4	0.3 ± 0.2	...	...	1.43	3 N l a	b F
563	2PBC J1125.4+5424	Mrk 0040	Sy1	171.365	54.382	2.76	1.25	12.69	1.2 ± 0.6	0.32 ± 0.07	0.0206	43.06	1.48	3 Y h a	b
564	**2PBC J1126.8+3512**	Mrk 423	Sy1	171.717	35.216	4.39	2.21	5.65	0.9 ± 0.6	0.4 ± 0.1	0.0319	43.31	1.56	3 N h b	
565	**2PBC J1126.9+1851**	...	...	171.725	18.861	4.28	...	5.89	0.8 ± 0.5	0.3 ± 0.1	...	...	1.55	2 N h	
566	2PBC J1127.4+1908	RX J1127.2+1909	Sy1	171.833	19.121	3.03	2.09	10.70	1.6 ± 0.5	0.31 ± 0.06	0.1000	44.60	1.49	3 Y h a	b
567	2PBC J1127.5-2913	ESO 439-9	Sy2	171.889	-29.243	3.96	2.31	6.71	1.4 ± 0.9	0.7 ± 0.2	0.0251	43.29	1.87	1 Y h a	
		1RXS J112744.2-291046	X				4.46				...	...			
568	**2PBC J1127.7-5320**	...	...	171.945	-53.344	4.76	...	4.95	0.7 ± 0.4	0.3 ± 0.2	...	...	1.29	1 N h	
569	2PBC J1130.1-1449	OM -146	BZQ	172.529	-14.814	2.56	0.62	14.62	3.2 ± 1.9	0.52 ± 0.05	1.1870	47.24	1.50	3 Y h a	b F
570	**2PBC J1130.4+6848**	2EUVE J1131+68.8	Sy1	172.624	68.803	4.77	5.02	4.93	0.4 ± 0.3	0.2 ± 0.2	0.0430	43.27	1.33	2 N h a	b
571	2PBC J1131.0-6256	IGR J11305-6256	HXB	172.790	-62.938	2.27	0.40	18.31	2.9 ± 0.4	0.24 ± 0.03	...	...	2.22	2 Y l a	I
572	**2PBC J1132.6+5259**	NGC 3718	LIN	173.168	52.994	4.17	4.51	6.15	0.8 ± 0.5	0.4 ± 0.1	0.0033	41.29	1.56	3 N h a	
573	**2PBC J1132.9+1017**	BZQJ1132+1023	BZQ	173.202	10.274	3.00	1.30	10.91	1.7 ± 0.9	0.41 ± 0.07	0.5397	46.28	1.52	1 N h b	b
		2MASX J11324928+1017473	Sy1				1.35				0.0436	43.87			
		1RXS J113244.0+102041	Sy1				4.28				0.1450	44.97			
574	2PBC J1137.2+6735	RBS 1004	BLA	174.020	67.657	4.36	3.36	5.71	0.6 ± 0.3	0.2 ± 0.1	0.1350	44.48	1.59	3 Y h a	b F
575	2PBC J1136.4+2134	Mrk 739	BZB	174.127	21.554	2.75	2.53	12.81	1.4 ± 0.6	0.32 ± 0.07	0.0298	43.44	1.74	3 Y h a	b
576	**2PBC J1136.8-6005**	IGR J11366-6002	AG?	174.202	-60.090	3.98	2.40	6.67	1.5 ± 0.9	0.46 ± 0.09	0.0140	42.81	1.63	3 N l a	I f
577	**2PBC J1136.9+6120**	4C 61.23	Sy2	174.240	61.335	4.91	2.84	5.16	0.7 ± 0.5	0.4 ± 0.2	0.1110	44.32	1.36	1 N h b	
578	**2PBC J1138.7+2528**	...	...	174.699	25.481	4.40	...	5.64	0.8 ± 0.5	0.4 ± 0.1	...	...	1.48	2 N h	
579	2PBC J1139.0-3744	NGC 3783	Sy1	174.752	-37.733	1.19	0.43	76.81	15.4 ± 0.4	0.402 ± 0.009	0.0096	43.50	1.71	1 Y h a	I b
580	2PBC J1139.0+5911	RBS 1011	Sy1	174.779	59.192	2.59	0.48	14.27	2.1 ± 0.5	0.35 ± 0.04	0.0600	44.25	1.41	1 Y h a	b
581	**2PBC J1139.5-6523**	V* GT Mus	EB*	174.892	-65.393	4.01	0.54	6.58	0.8 ± 0.4	0.14 ± 0.08	...	...	2.03	2 N l a	I b
582	2PBC J1139.6+3157	NGC 3786	Sy1	174.900	31.943	3.15	2.43	9.99	1.6 ± 1.0	0.49 ± 0.08	0.0100	42.56	1.31	1 Y h a	f
583	**2PBC J1140.8+3611**	...	...	175.219	36.190	4.37	...	5.70	0.9 ± 0.6	0.5 ± 0.1	...	...	1.27	1 N h	
584	2PBC J1141.2+2156	RBS 1019	Sy1	175.300	21.914	3.34	1.76	9.02	1.4 ± 0.8	0.43 ± 0.08	0.0630	44.12	1.73	3 Y h a	b
585	**2PBC J1141.2-6409**	V* V1033 Cen	CV*	175.319	-64.159	4.90	0.99	5.18	0.6 ± 0.3	< 0.1	...	...	1.59	2 N l b	b
586	2PBC J1143.6+7141	DO Dra	DQ*	175.886	71.709	2.18	1.30	19.84	1.6 ± 0.6	0.15 ± 0.04	...	...	1.89	2 Y h a	b
587	2PBC J1144.1-6106	UCAC2 4813819	HXB	176.049	-61.118	1.94	1.48	25.12	4.1 ± 0.4	0.33 ± 0.03	...	...	4.32	3 Y l a	I f
588	2PBC J1144.4+3652	RBS 1024	Sy1	176.112	36.864	4.44	1.43	5.54	1.2 ± 0.8	0.7 ± 0.1	0.0400	43.63	1.66	1 Y h a	b
589	2PBC J1144.9+7940	MCG+13-09-002	Sy1	176.187	79.678	2.25	1.42	18.65	2.5 ± 0.4	0.32 ± 0.04	0.0153	43.11	1.15	1 Y h a	b
590	**2PBC J1145.4+5858**	MCG+10-17-061	G	176.372	58.983	3.53	0.57	8.20	1.1 ± 0.6	0.34 ± 0.09	0.0103	42.40	1.56	3 N h a	
591	**2PBC J1145.6-6955**	2MASS J11455362-6954017	QSO	176.402	-69.922	4.31	1.95	5.82	1.3 ± 0.8	0.42 ± 0.09	...	...	1.30	1 N h a	I b
592	2PBC J1145.7-1826	RBS 1030	Sy1	176.430	-18.438	1.99	1.18	23.66	4.6 ± 0.5	0.41 ± 0.03	0.0329	44.06	1.22	1 Y h a	I b

Table 2. continued.

	PBC name	ID	Type[a]	RA (deg)	Dec (deg)	Error radius (arcmin)	Offset (arcmin)	SNR	Flux[b] (erg cm^{-2} s^{-1})	Hardness ratio (R_{30-150}/R_{14-150})	Redshift	log L_{14-150}[c] (erg s^{-1})	Var	Flag 1[d] A B C D	Flag 2[e] I R F
593	**2PBC J1145.9+7422**	2MASX J11462959+7421289	Sy2	176.772	74.344	4.95	2.64	5.09	0.9 ± 0.5	0.5 ± 0.1	0.0560	43.80	1.36	3 N h b	
594	2PBC J1147.5-6157	1E 1145.1-6141	HXB	176.866	-61.961	0.89	0.44	193.12	28.8 ± 0.3	0.239 ± 0.003	...	...	13.73	3 Y l a	I b
595	**2PBC J1148.8+2938**	MCG+05-28-032	LIN	177.202	29.643	3.13	0.57	10.11	1.7 ± 1.0	0.50 ± 0.07	0.0230	43.29	1.62	1 N h a	
596	**2PBC J1149.2-0413**	RBS 1037	Sy1	177.305	-4.277	3.95	1.36	6.77	1.0 ± 0.6	0.3 ± 0.1	0.0850	44.27	1.48	1 N h b	b
597	**2PBC J1149.3+5318**	2MASS J11492152+5320132	AGN	177.341	53.311	4.77	1.58	4.91	0.5 ± 0.3	0.2 ± 0.2	0.0950	44.06	1.31	3 N h b	
		2MASS J11493687+5315169	QSO				4.03				0.1902	44.74			
598	2PBC J1152.2-1122	RBS 1044	Sy1	178.032	-11.360	3.13	1.31	10.12	1.6 ± 0.9	0.37 ± 0.08	0.0490	43.96	1.32	1 Y h a	b
599	**2PBC J1152.8-0511**	MCG-01-30-041	Sy1	178.202	-5.194	4.89	2.67	5.20	0.7 ± 0.4	0.4 ± 0.2	0.0187	42.72	1.54	3 N h a	b
600	2PBC J1153.4+4930	RBS 1046	BZQ	178.380	49.528	3.73	1.21	7.47	0.8 ± 0.5	0.4 ± 0.1	0.3340	45.48	1.35	3 Y h a	b
601	**2PBC J1156.2+0140**	...	...	179.067	1.677	4.92	...	5.14	0.3 ± 0.5	< 0.3	...	...	1.66	2 N h	
602	2PBC J1158.1+5527	NGC 3998	LIN	179.496	55.451	2.86	0.40	11.93	1.4 ± 0.8	0.36 ± 0.07	0.0036	41.61	1.25	3 Y h a	b
603	**2PBC J1158.4+4232**	IC 751	Sy2	179.621	42.545	4.49	4.59	5.44	0.8 ± 0.6	0.6 ± 0.2	0.0318	43.28	1.77	1 N l b	
604	**2PBC J1159.8-2004**	2MASS J11594101-1959247	QSO	179.960	-20.072	4.65	5.36	5.14	0.9 ± 0.6	0.4 ± 0.2	0.4500	45.80	1.27	3 N l a	b
605	2PBC J1201.0+0647	CGCG 041-020	Sy2	180.247	6.831	2.82	1.53	12.23	1.8 ± 1.0	0.40 ± 0.07	0.0359	43.73	1.79	1 Y h a	I
606	2PBC J1201.3-0340	Mrk 1310	Sy1	180.314	-3.665	3.73	0.83	7.47	1.2 ± 0.7	0.4 ± 0.1	0.0196	43.00	1.26	3 Y h a	b
607	2PBC J1202.8-5349	2MASX J12024767-5350082	Sy2	180.723	-53.839	2.01	0.89	23.39	4.4 ± 0.4	0.35 ± 0.03	0.0283	43.90	1.59	3 Y h a	I
608	2PBC J1203.1+4430	NGC 4051	Sy1	180.800	44.511	1.84	1.30	27.79	3.3 ± 0.3	0.31 ± 0.02	0.0021	41.53	1.76	3 Y h a	I b
609	2PBC J1204.4+2018	NGC 4074	Sy2	181.102	20.302	2.68	1.49	13.44	1.9 ± 1.1	0.44 ± 0.06	0.0225	43.32	1.61	1 Y h a	I
610	**2PBC J1204.7-4344**	1RXS J120452.8-434353	X	181.181	-43.745	4.86	1.86	5.25	0.7 ± 0.4	0.4 ± 0.2	0.0148	42.54	1.31	1 N h b	b
611	2PBC J1204.7+3108	UGC 07064	Sy1	181.218	31.152	4.09	2.44	6.36	0.9 ± 0.6	0.4 ± 0.1	0.0250	43.12	1.29	3 Y h a	f
612	2PBC J1206.2+5244	NGC 4102	LIN	181.591	52.730	2.81	1.16	12.25	2.1 ± 1.2	0.49 ± 0.06	0.0028	41.58	1.40	3 Y h a	
613	2PBC J1207.6+3353	7C 1205+3409	rG	181.904	33.881	4.06	0.87	6.46	1.2 ± 0.8	0.6 ± 0.1	0.0788	44.22	1.38	1 Y h a	
614	2PBC J1207.9+4306	NGC 4117	Sy2	181.963	43.133	4.31	0.99	5.83	0.9 ± 0.6	0.5 ± 0.1	0.0029	41.24	1.43	1 Y h a	
615	2PBC J1209.1+4702	Mrk 0198	Sy2	182.280	47.042	2.56	1.51	14.57	1.7 ± 0.9	0.36 ± 0.05	0.0245	43.37	1.61	3 Y h a	
616	2PBC J1209.5+4342	NGC 4138	Sy1	182.367	43.710	2.23	1.52	18.96	2.8 ± 0.9	0.46 ± 0.04	0.0029	41.72	1.44	3 Y h a	I
617	**2PBC J1210.0-4634**	2MASX J12100404-4636274	G	182.502	-46.583	4.44	1.60	5.55	1.0 ± 0.6	0.4 ± 0.2	0.0315	43.34	1.46	1 N h a	b
618	2PBC J1210.5+3924	NGC 4151	Sy1	182.630	39.404	0.79	0.28	309.75	45.6 ± 0.3	0.444 ± 0.002	0.0032	43.02	22.61	3 Y h a	I
619	2PBC J1210.7+3819	KUG 1208+386	GiG	182.680	38.317	2.71	1.14	13.11	1.6 ± 0.9	0.37 ± 0.06	0.0227	43.29	1.60	3 Y h a	I
620	**2PBC J1211.3-3933**	2MASX J12111425-3933268	AGN	182.843	-39.566	3.90	1.62	6.91	1.1 ± 0.7	0.4 ± 0.1	0.0610	43.99	1.39	1 N h b	
621	**2PBC J1212.5-5802**	PBCX J121226.1-580023	X	183.125	-58.037	4.58	1.93	5.27	0.9 ± 0.5	0.3 ± 0.1	...	...	1.53	1 N l a	I
622	2PBC J1212.8+0703	2MASS J12124981+0659451	QSO	183.205	7.034	4.00	2.29	6.60	1.4 ± 0.9	0.5 ± 0.1	0.2095	45.19	1.64	1 Y h a	I
		PBCX J121238.6+070129	X				2.69				...	...			
623	2PBC J1212.9-6453	EXMS B1210-645	HXB	183.255	-64.897	2.79	1.75	12.44	1.1 ± 0.6	< 0.05	...	...	1.26	2 Y l a	I
624	**2PBC J1213.0+3239**	...	...	183.267	32.651	4.70	...	5.04	0.9 ± 0.5	0.4 ± 0.1	...	...	1.37	1 N h	
625	**2PBC J1213.7-6015**	...	...	183.425	-60.261	4.32	...	5.79	0.8 ± 0.5	< 0.1	...	...	1.67	2 N l	
626	2PBC J1214.2+2932	Was 49	Sy1	183.569	29.552	3.58	1.41	8.01	1.4 ± 0.8	0.40 ± 0.07	0.0640	44.13	1.77	1 Y h a	I f
627	**2PBC J1215.3-3244**	...	...	183.826	-32.734	4.90	...	5.18	0.8 ± 0.5	0.5 ± 0.2	...	...	1.45	3 N h	
628	2PBC J1215.8+5046	Mrk 1469	Sy1	183.992	50.834	3.65	1.50	7.74	0.8 ± 0.5	0.6 ± 0.2	0.0312	43.23	1.53	1 Y h a	b
629	**2PBC J1216.9-2615**	ESO 505-31	Sy2	184.282	-26.201	3.47	1.82	8.44	1.3 ± 0.8	0.4 ± 0.1	0.0403	43.69	1.38	3 N h b	
		ESO 505-30	Sy2				2.49				0.0400	43.68			
630	**2PBC J1217.2+6426**	2MASS J12170480+6428228	QSO	184.301	64.436	4.70	2.33	5.05	0.3 ± 0.2	< 0.2	0.2777	45.03	1.31	2 N l b	
631	2PBC J1217.1+0712	NGC 4235	Sy1	184.302	7.178	2.68	1.08	13.41	2.5 ± 1.4	0.43 ± 0.05	0.0077	42.51	1.69	3 Y h a	I b
632	2PBC J1218.4+2949	Mrk 766	Sy1	184.614	29.813	2.47	0.15	15.62	1.9 ± 0.3	0.22 ± 0.04	0.0126	42.82	1.50	3 Y h a	I b
633	2PBC J1218.9+4718	NGC 4258	LIN	184.740	47.310	2.67	0.37	13.47	1.8 ± 1.0	0.43 ± 0.06	0.0015	40.98	1.61	1 Y h a	I b
634	**2PBC J1220.1+0643**	2MASS J12201843+0641196	QSO	185.041	6.723	4.49	2.94	5.45	0.9 ± 0.6	0.4 ± 0.1	0.2870	45.35	1.49	3 N h a	b
635	**2PBC J1221.3+3008**	1RXS J122121.7+301041	BZB	185.328	30.149	4.18	1.83	6.15	0.6 ± 0.3	0.3 ± 0.1	0.1836	44.80	1.60	2 N h a	b F
636	**2PBC J1221.3-1110**	2MASS J12212532-1111376	QSO	185.330	-11.175	4.70	1.87	5.04	0.7 ± 0.4	0.2 ± 0.1	0.2090	45.05	1.45	2 N h b	
637	2PBC J1221.8+7519	Mrk 205	Sy1	185.449	75.303	2.89	0.50	11.66	1.1 ± 0.6	0.24 ± 0.07	0.0700	44.12	1.55	3 Y h a	b
638	2PBC J1222.3+0415	4C 04.42	BZQ	185.589	4.236	3.30	0.93	9.21	2.5 ± 1.6	0.59 ± 0.07	0.9650	46.87	1.33	3 Y h a	I b F
639	2PBC J1223.4+0240	Mrk 50	Sy1	185.860	2.681	2.75	0.57	12.77	2.0 ± 1.2	0.46 ± 0.07	0.0231	43.39	1.68	3 Y h a	I b
640	2PBC J1223.9+4042	SDSS J122358.97+404409.3	QSO	186.009	40.701	3.87	2.16	6.99	0.7 ± 0.4	0.2 ± 0.1	0.0964	44.24	1.24	1 Y h a	f
641	2PBC J1224.8+2122	4C +21.35	BZQ	186.224	21.383	3.12	0.26	10.16	1.7 ± 1.0	0.41 ± 0.07	0.4350	46.04	1.56	3 Y h a	b F
642	2PBC J1225.7+1240	NGC 4388	Sy2	186.447	12.662	1.00	0.06	128.26	23.1 ± 0.3	0.453 ± 0.006	0.0084	43.56	5.28	3 Y h a	I
643	2PBC J1225.7+3331	NGC 4395	Sy1	186.448	33.516	2.60	1.86	14.16	2.1 ± 1.1	0.41 ± 0.05	0.0010	40.66	1.42	3 Y h a	I
644	2PBC J1226.6-6246	GX 301-2	HXB	186.665	-62.771	0.62	0.23	1843.25	236.1 ± 0.3	0.0678 ± 0.0003	...	...	95.32	2 Y l a	I
645	2PBC J1228.0-4854	XSS J12270-4859	CV*	187.004	-48.890	2.45	0.22	15.85	3.3 ± 1.0	0.44 ± 0.05	...	...	1.47	1 Y h a	I ?
646	**2PBC J1228.0-0925**	...	...	187.019	-9.426	4.84	...	5.28	1.0 ± 0.7	0.5 ± 0.2	...	...	1.29	1 N h	
647	2PBC J1229.1+0202	3C 273	BZQ	187.276	2.043	0.92	0.55	168.31	35.6 ± 0.3	0.464 ± 0.004	0.1583	46.37	9.84	3 Y h a	I b F
648	**2PBC J1231.3+7044**	2MASS J12313656+7044144	Sy1	187.845	70.747	4.83	1.29	4.82	0.6 ± 0.4	0.3 ± 0.1	0.2080	44.94	1.40	1 N h a	b
649	**2PBC J1231.4+5759**	...	...	187.858	57.993	4.49	...	5.44	0.8 ± 0.5	0.4 ± 0.1	...	...	1.93	2 N h	
650	2PBC J1231.9+2013	RBS 1125	Sy1	187.998	20.188	4.31	2.04	5.83	0.9 ± 0.6	0.6 ± 0.2	0.0640	43.92	1.74	1 Y h a	b

Table 2. continued.

	PBC name	ID	Type[a]	RA (deg)	Dec (deg)	Error radius (arcmin)	Offset (arcmin)	SNR	Flux[b] (erg cm^{-2} s^{-1})	Hardness ratio (R_{30-150}/R_{14-150})	Redshift	log L_{14-150}[c] (erg s^{-1})	Var	Flag 1[d] A B C D	Flag 2[e] I R F
651	2PBC J1232.2-4216	1RXS J123212.3-421745	Sy1	188.032	-42.285	4.28	1.10	5.89	1.1 ± 0.7	0.4 ± 0.1	0.1000	44.43	1.41	1 Y h a	b
652	2PBC J1234.7-6434	IGR J12349-6434	Sy*	188.712	-64.572	1.67	0.53	34.36	6.3 ± 0.4	0.29 ± 0.02	...	...	1.80	3 Y l a	I
653	2PBC J1235.5-3954	NGC 4507	Sy2	188.901	-39.900	1.23	0.57	70.91	16.7 ± 0.4	0.413 ± 0.009	0.0117	43.71	2.46	1 Y h a	I
654	**2PBC J1237.7+1150**	M 58	LIN	189.430	11.847	4.77	1.72	4.91	0.9 ± 0.6	0.5 ± 0.2	0.0050	41.70	1.83	1 N h a	b
655	**2PBC J1238.1-3843**	V* V1025 Cen	DQ*	189.541	-38.718	4.67	1.34	5.10	0.7 ± 1.4	< 0.1	...	...	1.37	3 N h a	b
656	2PBC J1238.8-2719	ESO 506- G 027	Sy2	189.726	-27.311	1.81	0.20	28.74	7.6 ± 0.6	0.47 ± 0.02	0.0252	44.04	1.83	3 Y h a	I
657	2PBC J1239.1-1612	IGR J12391-1612	Sy2	189.779	-16.194	2.50	0.86	15.20	3.9 ± 1.5	0.47 ± 0.04	0.0367	44.08	1.32	3 Y h a	I
658	2PBC J1239.6-0520	NGC 4593	Sy1	189.909	-5.338	1.63	0.49	36.36	7.6 ± 0.3	0.43 ± 0.02	0.0090	43.13	1.69	3 Y h a	I b
659	**2PBC J1240.3+3458**	7C 1237+3519	QSO	190.082	34.977	4.33	4.37	5.79	0.8 ± 0.5	0.4 ± 0.2	1.1992	46.70	1.45	1 N h a	f
660	2PBC J1240.6-3334	1ES 1238-332	Sy1	190.202	-33.559	3.14	0.70	10.06	1.9 ± 1.1	0.41 ± 0.08	0.0500	44.05	1.48	1 Y h a	b
661	**2PBC J1240.8+2736**	2MASX J12410866+2734463	Sy1	190.210	27.601	4.27	4.14	5.91	0.8 ± 0.5	0.4 ± 0.1	0.2050	45.01	1.43	3 N h b	
		1RXS J124104.2+273535	X				3.09				...	...			
662	**2PBC J1240.9+6241**	...	...	190.237	62.686	4.93	...	5.12	0.3 ± 0.6	< 0.2	...	...	1.40	2 N h	
663	2PBC J1241.5-5749	IGR J12415-5750	Sy2	190.373	-57.823	2.45	0.82	15.90	3.6 ± 1.1	0.45 ± 0.04	0.0242	43.67	1.88	3 Y h a	I b
664	**2PBC J1243.1-6306**	HIP 62027	HXB	190.781	-63.101	4.70	3.19	5.04	0.6 ± 0.4	< 0.1	...	...	1.51	3 N l a	I b
665	2PBC J1246.5+5432	NGC 4686	LIN	191.650	54.523	2.70	0.86	13.20	2.1 ± 1.0	0.43 ± 0.05	0.0167	43.12	1.67	3 Y h a	
666	**2PBC J1248.0-5826**	2MASX J12475784-5829599	IR	192.013	-58.447	4.22	3.23	6.03	0.9 ± 0.5	0.4 ± 0.1	...	...	1.15	3 N l a	I
667	2PBC J1249.8-5906	3A 1246-588	LXB	192.427	-59.100	1.67	0.86	34.07	6.2 ± 0.3	0.32 ± 0.02	...	...	2.49	3 Y l a	I b
668	**2PBC J1251.8-5127**	1RXS J125144.2-512809	X	192.963	-51.454	4.93	1.40	5.13	1.0 ± 0.6	0.4 ± 0.1	...	...	1.38	3 N h b	b
669	**2PBC J1252.1-1323**	NGC 4748	Sy1	193.048	-13.398	4.56	1.04	5.30	0.8 ± 0.5	0.2 ± 0.1	0.0137	42.55	1.60	3 N h a	I b
670	2PBC J1252.3-2914	EX Hya	DQ*	193.106	-29.252	2.26	0.32	18.43	2.5 ± 1.0	0.17 ± 0.04	...	...	2.19	3 Y h a	b
671	2PBC J1253.3-4137	ESO 323-32	Sy2	193.356	-41.619	3.72	1.44	7.49	1.5 ± 0.8	0.37 ± 0.09	0.0159	42.92	1.61	3 Y h a	I
672	**2PBC J1254.8-2655**	2MASX J12545637-2657021	AGN	193.714	-26.928	4.43	1.75	5.56	1.2 ± 0.7	0.4 ± 0.1	0.0591	44.00	1.33	3 N h a	b
673	2PBC J1256.1-0547	3C 279	BZQ	194.041	-5.803	2.77	0.90	12.59	3.4 ± 2.0	0.49 ± 0.05	0.5362	46.50	1.57	1 Y h a	I b F
674	**2PBC J1256.4+2253**	...	...	194.117	22.896	5.03	...	4.96	0.3 ± 0.2	< 0.2	...	...	1.81	2 N h	
675	2PBC J1257.7-6917	1H 1254-690	LXB	194.426	-69.297	1.39	0.64	51.97	4.3 ± 0.4	0.04 ± 0.01	...	...	1.41	2 Y h a	I b
676	2PBC J1259.5+2756	Coma Cluster	ClG	194.909	27.951	1.51	2.94	43.03	2.7 ± 0.4	0.03 ± 0.02	0.0231	43.53	2.20	2 Y h a	I
677	**2PBC J1300.1+1636**	2MASS J13000535+1632148	Sy1	195.040	16.600	4.88	3.90	5.21	1.1 ± 0.7	0.6 ± 0.2	0.0800	44.20	1.80	1 N h a	
678	2PBC J1301.2-6136	GX 304-1	HXB	195.311	-61.624	1.87	1.34	27.05	4.5 ± 0.4	0.21 ± 0.02	...	...	4.33	3 Y l a	I
679	2PBC J1302.1-6356	IGR J13020-6359	HXB	195.529	-63.947	2.22	1.61	19.18	3.7 ± 0.4	0.31 ± 0.03	...	...	3.22	3 Y l a	I
680	2PBC J1302.8+1622	Mrk 783	Sy1	195.721	16.375	3.43	2.36	8.64	1.5 ± 0.9	0.36 ± 0.07	0.0670	44.20	1.83	3 Y h a	I b
681	**2PBC J1303.2-1339**	2MASX J13032223-1341332	Sy1	195.807	-13.663	4.15	2.74	6.22	1.3 ± 0.8	0.4 ± 0.1	0.0461	43.80	1.64	1 N h a	b
682	2PBC J1304.0+5347	IGR J13038+5348	Sy1	196.007	53.795	2.21	0.39	19.37	2.6 ± 0.4	0.40 ± 0.04	0.0298	43.73	1.70	3 Y h a	I b
683	2PBC J1304.0-1019	NGC 4939	Sy1	196.050	-10.327	3.63	0.92	7.79	1.8 ± 1.1	0.53 ± 0.10	0.0103	42.63	1.44	1 Y h a	I
684	2PBC J1304.2-0533	NGC 4941	Sy2	196.062	-5.554	4.19	0.48	6.11	1.8 ± 1.1	0.48 ± 0.09	0.0037	41.73	1.47	3 Y h a	I f
685	2PBC J1305.4-4928	NGC 4945	Sy2	196.353	-49.474	1.16	0.27	82.69	23.7 ± 0.3	0.529 ± 0.008	0.0019	42.27	4.70	3 Y h a	I b F
686	2PBC J1306.5-4025	ESO 323-77	Sy2	196.643	-40.422	2.23	1.55	18.92	4.1 ± 0.4	0.41 ± 0.03	0.0149	43.31	1.40	3 Y h a	I ?
687	2PBC J1309.0+1138	NGC 4992	Sy2	197.287	11.635	2.07	0.78	21.95	5.0 ± 0.8	0.50 ± 0.03	0.0252	43.85	1.86	3 Y h a	I
688	**2PBC J1310.1-1714**	...	...	197.537	-17.243	4.91	...	5.15	1.1 ± 0.7	0.4 ± 0.1	...	...	1.29	3 N h	
689	2PBC J1310.7-5551	IGR J13109-5552	Sy1	197.693	-55.854	2.91	0.62	11.55	3.0 ± 1.8	0.51 ± 0.06	0.1040	44.89	1.63	1 Y h a	I
690	**2PBC J1310.8-5625**	2MASX J13103701-5626551	G	197.725	-56.418	4.85	2.96	5.26	1.2 ± 0.7	0.5 ± 0.1	...	...	1.72	3 N h a	I
691	2PBC J1313.0-1108	RBS 1233	Sy1	198.267	-11.135	3.63	0.57	7.81	1.6 ± 0.9	0.34 ± 0.08	0.0343	43.65	1.59	3 Y h a	I b
692	2PBC J1315.2+4423	Mrk 248	Sy2	198.836	44.415	2.56	0.98	14.62	1.5 ± 0.5	0.30 ± 0.06	0.0353	43.64	1.42	3 Y h a	I
693	**2PBC J1317.0-7155**	2MASX J13165424-7155270	G	199.254	-71.924	4.23	0.52	6.01	1.1 ± 0.6	0.3 ± 0.1	...	...	1.86	3 N h a	b
694	2PBC J1318.2-6259	IGR J13186-6257	gam	199.591	-62.970	3.31	2.15	9.19	1.6 ± 0.9	0.31 ± 0.07	...	...	1.31	1 Y l a	I
695	**2PBC J1320.2-4014**	...	...	200.055	-40.248	5.02	...	4.97	0.3 ± 9.9	< 0.2	...	...	1.47	2 N h	
696	**2PBC J1320.3-7013**	1RXS J132032.3-701451	X	200.088	-70.230	4.84	1.22	4.81	0.7 ± 0.4	0.3 ± 0.1	...	...	1.66	2 N h a	b
697	**2PBC J1320.6+6014**	RBS 1252	Sy1	200.145	60.275	4.56	1.43	5.30	0.3 ± 0.1	< 0.3	0.1000	43.85	1.26	3 N h b	b
		2MASS J13204800+6019466	QSO				3.67				0.3091	45.00			
698	**2PBC J1321.1+0858**	NGC5100	GiP	200.277	8.980	4.10	1.44	6.34	1.0 ± 0.6	0.4 ± 0.1	0.0319	43.34	1.61	1 N h a	
699	2PBC J1322.4-1644	MCG-03-34-063	Sy2	200.602	-16.727	2.61	0.08	14.03	2.8 ± 0.7	0.35 ± 0.05	0.0167	43.24	2.35	3 Y h a	I
700	2PBC J1325.4-4301	Cen A	BZU	201.362	-43.026	0.73	0.43	467.31	115.3 ± 0.4	0.436 ± 0.001	0.0018	42.92	37.40	1 Y h a	I b F
701	2PBC J1326.4-6207	4U 1323-62	LXB	201.606	-62.124	1.08	1.45	101.03	17.7 ± 0.3	0.298 ± 0.006	...	...	7.42	3 Y l a	I
702	**2PBC J1328.2-2719**	2MASX J13280995-2719544	GiC	202.056	-27.329	4.48	0.80	5.46	1.1 ± 0.6	0.3 ± 0.1	0.0417	43.66	1.48	3 N h a	b
703	**2PBC J1329.6-1053**	...	...	202.411	-10.885	4.25	...	5.97	1.0 ± 0.6	0.4 ± 0.1	...	...	1.71	3 N h	
704	2PBC J1331.2-2523	RHS 37	Sy1	202.816	-25.403	3.94	0.46	6.80	1.7 ± 1.1	0.46 ± 0.10	0.0264	43.43	1.49	3 Y h a	b
705	2PBC J1332.0+1116	2MASX J13315225+1116496	Sy1	202.984	11.283	4.14	0.94	6.23	1.0 ± 0.6	0.5 ± 0.1	0.0910	44.29	1.40	2 Y h a	b
706	**2PBC J1332.0-0510**	PKS 1329-049	BZQ	203.011	-5.175	4.44	0.87	5.55	1.1 ± 0.6	0.4 ± 0.1	2.1500	47.66	1.70	1 N h a	f F
707	**2PBC J1332.1-7751**	ESO 21-4	G	203.034	-77.863	4.00	2.04	6.60	1.4 ± 0.9	0.47 ± 0.10	0.0103	42.51	1.47	3 N h a	
708	2PBC J1333.3-3400	ESO 383-18	Sy2	203.348	-34.005	3.05	0.89	10.59	1.9 ± 1.0	0.14 ± 0.05	0.0130	42.86	1.45	2 Y h a	I
709	2PBC J1334.5-2324	ESO 509-66	Sy2	203.671	-23.417	3.78	1.81	7.27	2.1 ± 1.2	0.43 ± 0.08	0.0446	43.99	1.55	1 Y h a	

Table 2. continued.

	PBC name	ID	Type[a]	RA (deg)	Dec (deg)	Error radius (arcmin)	Offset (arcmin)	SNR	Flux[b] (erg cm^{-2} s^{-1})	Hardness ratio (R_{30-150}/R_{14-150})	Redshift	log L_{14-150}[c] (erg s^{-1})	Var	Flag 1[d] A B C D	Flag 2[e] I R F
710	2PBC J1335.8+0301	NGC 5231	AGN	203.943	3.018	3.67	1.26	7.65	1.8 ± 1.0	0.40 ± 0.07	0.0216	43.27	1.65	3 Y h a	
711	2PBC J1335.8-3417	1H 1334-340	Sy1	203.973	-34.299	1.86	0.22	27.13	6.0 ± 0.4	0.29 ± 0.02	0.0078	42.92	1.63	1 Y h a	I b
712	2PBC J1338.1+0432	NGC 5252	Sy2	204.563	4.543	1.54	0.24	40.76	9.2 ± 0.4	0.46 ± 0.01	0.0222	44.01	4.95	3 Y h a	I
713	2PBC J1341.2+3022	Mrk 268	Sy2	205.292	30.365	2.77	0.79	12.64	1.6 ± 0.9	0.41 ± 0.06	0.0404	43.79	1.66	3 Y h a	I
714	2PBC J1341.2-1439	RBS 1303	Sy1	205.302	-14.652	3.30	0.43	9.21	1.9 ± 1.0	0.41 ± 0.08	0.0417	43.89	1.80	3 Y h a	b
715	2PBC J1341.9+3537	NGC 5273	Sy1	205.529	35.666	3.62	0.75	7.86	1.2 ± 0.8	0.42 ± 0.08	0.0035	41.55	1.70	2 Y h a	f
716	**2PBC J1344.2+5551**	Mrk 273	Sy2	206.066	55.861	4.78	3.96	4.91	0.6 ± 0.4	0.5 ± 0.2	0.0372	43.27	1.79	3 N h a	
717	2PBC J1344.2+1934	2MASX J13441569+1933596	LIN	206.095	19.608	4.31	3.03	5.83	1.1 ± 0.7	0.43 ± 0.10	...	...	1.67	1 Y h a	
718	**2PBC J1345.2+5331**	BZUJ1345+5332	BLA	206.320	53.522	4.76	4.50	4.93	0.6 ± 0.4	0.5 ± 0.2	0.1350	44.46	1.53	3 N l b	b
719	2PBC J1345.4+4141	NGC 5290	G	206.338	41.679	3.65	2.03	7.72	1.4 ± 0.9	0.50 ± 0.08	0.0086	42.37	1.66	3 Y h a	b
720	**2PBC J1346.5+1923**	1RXS J134628.5+192310	X	206.635	19.389	4.43	0.91	5.57	0.9 ± 0.6	0.5 ± 0.1	...	...	1.91	3 N h b	b
721	**2PBC J1347.3+7321**	8C 1345+735	Sy1	206.842	73.355	4.75	5.29	4.95	0.4 ± 0.2	0.3 ± 0.2	0.2900	45.05	1.44	3 N l b	b
722	2PBC J1347.4-3254	ABELL 3571	ClG	206.856	-32.910	4.22	2.73	6.05	0.7 ± 0.4	< 0.1	0.0414	43.50	1.62	2 Y h a	
723	2PBC J1347.5-6035	4U 1344-60	Sy1	206.874	-60.592	1.43	1.13	48.46	9.0 ± 0.3	0.40 ± 0.01	0.0130	43.53	1.73	1 Y l a	I f
724	2PBC J1348.7+2635	ABELL 1795	ClG	207.191	26.608	4.12	3.54	6.29	0.5 ± 0.3	< 0.1	0.0624	43.69	1.78	2 Y h a	
725	**2PBC J1349.0+4443**	...	...	207.263	44.718	4.69	...	5.07	0.9 ± 0.6	0.6 ± 0.1	...	...	1.50	1 N h	
726	2PBC J1349.2-3018	IC 4329A	Sy1	207.329	-30.306	1.06	0.20	107.25	26.0 ± 0.4	0.380 ± 0.005	0.0160	44.17	2.50	1 Y h a	I b
727	2PBC J1349.8+0205	RX J1349.8+0204	Sy1	207.474	2.089	3.16	0.62	9.98	1.4 ± 0.8	0.36 ± 0.07	0.0328	43.55	1.90	1 Y h a	b
728	**2PBC J1350.6+2656**	...	...	207.670	26.941	4.96	...	5.08	0.6 ± 0.4	0.3 ± 0.1	...	...	1.51	3 N h	
729	**2PBC J1351.5-1815**	RBS 1323	Sy1	207.890	-18.259	3.77	1.98	7.32	1.4 ± 0.8	0.4 ± 0.1	0.0120	42.64	1.94	1 N h b	b
730	2PBC J1353.1+6918	Mrk 279	Sy1	208.282	69.311	1.92	0.39	25.55	3.8 ± 0.4	0.44 ± 0.03	0.0306	43.91	1.97	1 Y h a	b
731	**2PBC J1353.6-1125**	...	...	208.414	-11.421	3.99	...	6.65	1.1 ± 0.7	0.3 ± 0.1	...	...	1.83	3 N h	
732	2PBC J1354.3-3746	PGC 049418	Sy2	208.574	-37.773	2.88	0.45	11.78	2.3 ± 1.3	0.41 ± 0.06	0.0516	44.16	1.79	1 Y h a	I
733	**2PBC J1354.7+1325**	...	...	208.681	13.430	4.71	...	5.02	0.9 ± 0.6	0.5 ± 0.1	...	...	1.58	3 N h	
734	**2PBC J1355.5+3523**	RX J1355.4+3523	X	208.895	35.386	4.13	1.39	6.27	1.0 ± 0.6	0.4 ± 0.1	...	...	1.64	1 N h b	b
735	2PBC J1355.8+3833	Mrk 0464	Sy1	208.966	38.576	2.92	0.35	11.44	1.9 ± 1.1	0.44 ± 0.06	0.0507	44.06	1.91	3 Y h a	b
736	**2PBC J1356.0+1822**	Mrk 463	Sy2	209.006	18.383	4.77	0.75	4.93	0.8 ± 0.5	0.3 ± 0.1	0.0503	43.65	1.40	2 N h a	
737	**2PBC J1356.6-1930**	ESO 578-9	Sy1	209.168	-19.509	4.04	1.49	6.51	1.1 ± 0.7	0.26 ± 0.09	0.0352	43.52	1.68	3 N h b	b
738	**2PBC J1357.1+1919**	4C 19.44	BZQ	209.287	19.317	4.73	1.02	4.99	0.8 ± 0.5	0.4 ± 0.1	0.7194	46.24	1.29	1 N h a	b
739	**2PBC J1400.2+0500**	2MASS J14001840+0502421	AGN	210.067	5.015	4.80	1.90	4.87	0.9 ± 0.6	0.4 ± 0.1	0.0342	43.40	1.91	3 N h b	f
740	2PBC J1400.7-6323	IGR J14003-6326	gam	210.220	-63.445	3.47	1.30	8.45	1.5 ± 0.8	0.24 ± 0.06	...	...	1.38	2 Y l a	I
741	**2PBC J1405.5+4051**	1RXS J140543.6+405115	X	211.385	40.859	4.88	2.12	5.21	0.3 ± 0.2	0.2 ± 0.2	0.0688	43.59	1.61	2 N h b	b
742	2PBC J1408.2-3023	2MASX J14080674-3023537	Sy1	212.045	-30.399	3.33	0.75	9.07	1.6 ± 0.9	0.23 ± 0.06	0.0236	43.32	1.39	1 Y h a	
743	**2PBC J1409.9-0744**	...	...	212.477	-7.738	4.92	...	5.14	0.6 ± 0.3	< 0.1	...	...	1.44	2 N h	
744	**2PBC J1410.8-4227**	2MASX J14104482-4228325	G	212.707	-42.454	4.50	1.59	5.43	1.1 ± 0.6	0.29 ± 0.10	0.0339	43.47	1.40	3 N h a	
745	**2PBC J1412.2-3124**	...	...	213.072	-31.408	4.80	...	4.87	0.7 ± 0.4	0.3 ± 0.2	...	...	1.55	3 N h	
746	2PBC J1413.2-6519	Circinus Galaxy	Sy2	213.293	-65.342	1.02	0.15	119.70	23.9 ± 0.3	0.353 ± 0.005	0.0014	42.02	1.87	3 Y l a	I b
747	2PBC J1413.2-0312	NGC 5506	BZU	213.312	-3.212	1.07	0.27	103.55	21.1 ± 0.3	0.364 ± 0.006	0.0060	43.23	2.69	1 Y h a	I b
748	**2PBC J1414.2+1219**	RX J1414.1+1218	X	213.515	12.331	4.57	1.97	5.28	0.6 ± 0.4	0.1 ± 0.1	...	...	1.54	1 N h b	b
749	**2PBC J1416.8-1158**	1RXS J141650.6-115845	G	214.200	-11.981	4.72	0.61	5.01	1.3 ± 0.8	0.4 ± 0.1	0.0985	44.50	1.90	3 N h b	b
750	2PBC J1416.8-4639	IGR J14175-4641	Sy2	214.227	-46.660	3.15	2.58	9.99	2.0 ± 1.0	0.39 ± 0.06	0.0760	44.45	1.48	3 Y h a	I
751	**2PBC J1417.9+2543**	7C 1415+2556	BZB	214.480	25.733	4.48	0.65	5.46	0.7 ± 0.4	0.2 ± 0.1	0.2370	45.08	1.57	2 N h a	b F
752	2PBC J1417.9+2508	NGC 5548	Sy1	214.485	25.138	1.69	0.74	33.20	6.5 ± 0.3	0.43 ± 0.02	0.0166	43.61	1.70	3 Y h a	I b
753	**2PBC J1419.2+6804**	2MASS J14184990+6804097	IR	214.813	68.075	4.76	2.37	4.93	0.7 ± 0.5	0.6 ± 0.2	0.0770	43.98	1.50	1 N h a	
754	2PBC J1419.4-2639	RHS 39	Sy1	214.838	-26.637	2.37	0.51	16.82	4.2 ± 0.5	0.39 ± 0.03	0.0222	43.67	1.31	1 Y h a	I b
755	**2PBC J1421.1-6243**	H 1417-624	HXB	215.312	-62.709	2.87	0.70	11.80	1.9 ± 0.8	0.13 ± 0.05	...	...	3.01	3 N l b	I
756	2PBC J1421.4+4748	RBS 1378	Sy1	215.372	47.789	2.71	0.09	13.11	1.7 ± 0.9	0.40 ± 0.06	0.0720	44.32	1.41	1 Y h a	I b
757	**2PBC J1424.3+2436**	NGC 5610	GiC	216.087	24.605	3.51	0.70	8.29	1.3 ± 0.7	0.45 ± 0.09	0.0169	42.91	1.64	3 N h a	
758	2PBC J1426.0+3748	ABELL 1914	ClG	216.479	37.833	3.30	1.30	9.20	0.6 ± 0.3	< 0.09	0.1710	44.85	1.75	2 Y h a	b
759	2PBC J1427.4+1952	Mrk 813	Sy1	216.835	19.859	3.87	2.03	6.99	1.2 ± 0.7	0.4 ± 0.1	0.1310	44.73	1.53	3 Y h a	b
760	2PBC J1428.6+4239	H 1426+428	BZB	217.147	42.666	2.62	0.70	14.02	1.7 ± 0.4	0.32 ± 0.05	0.1290	44.90	1.89	3 Y h a	I b F
761	2PBC J1429.2+0119	Mrk 1383	Sy1	217.294	1.299	3.35	1.27	8.99	1.8 ± 0.6	0.35 ± 0.06	0.0860	44.52	1.86	1 Y h a	b
762	2PBC J1429.8-6711	IGR J14298-6715	LXB	217.525	-67.250	3.60	4.39	7.92	1.4 ± 0.6	0.28 ± 0.07	...	...	1.26	1 Y h a	I
763	**2PBC J1433.3-6115**	IGR J14331-6112	gam	218.347	-61.260	4.34	1.90	5.76	0.9 ± 0.6	0.4 ± 0.1	...	...	1.69	3 N l a	I
764	**2PBC J1433.9+0526**	NGC 5674	Sy1	218.493	5.442	4.74	1.75	4.97	1.0 ± 0.6	0.4 ± 0.1	0.0249	43.13	2.06	3 N h a	
765	2PBC J1434.9+4839	NGC 5683	Sy1	218.734	48.648	3.59	1.03	7.97	1.3 ± 0.7	0.33 ± 0.07	0.0410	43.72	1.37	1 Y h a	b
766	2PBC J1436.3+5848	Mrk 817	Sy1	219.086	58.807	2.24	0.80	18.80	2.3 ± 0.4	0.35 ± 0.04	0.0312	43.71	1.38	1 Y h a	b
767	**2PBC J1436.7-1615**	1RXS J143649.6-161344	QSO	219.189	-16.254	4.66	1.80	5.11	1.1 ± 0.7	0.5 ± 0.2	0.1445	44.76	1.67	3 N h b	b
768	2PBC J1439.0+1413	2MASX J14391186+1415215	AG?	219.804	14.257	3.71	0.26	7.52	1.4 ± 0.9	0.42 ± 0.08	0.0714	44.24	1.49	1 Y h a	
769	2PBC J1440.9+5330	Mrk 477	Sy2	220.214	53.512	3.04	2.04	10.64	1.0 ± 0.7	0.36 ± 0.09	0.0380	43.54	1.30	1 Y h a	
770	**2PBC J1442.3+2218**	1RXS J144218.9+221820	ClG	220.591	22.311	4.87	0.77	5.23	0.3 ± 0.3	< 0.2	0.0901	43.86	1.62	3 N h b	b

Table 2. continued.

	PBC name	ID	Type[a]	RA (deg)	Dec (deg)	Error radius (arcmin)	Offset (arcmin)	SNR	Flux[b] (erg cm^{-2} s^{-1})	Hardness ratio (R_{30-150}/R_{14-150})	Redshift	log L_{14-150}[c] (erg s^{-1})	Var	Flag 1[d] A B C D	Flag 2[e] I R F
		MCG+04-35-004	G				3.12				...	...			
771	2PBC J1442.4-1714	NGC 5728	Sy2	220.592	-17.239	1.89	0.95	26.45	7.4 ± 0.5	0.46 ± 0.02	0.0094	43.16	1.94	1 Y h a	I
772	**2PBC J1442.8+1202**	RBS 1420	BZB	220.705	12.045	4.83	2.05	4.82	0.3 ± 0.2	< 0.2	0.1630	44.51	1.26	2 N h a	b F
773	2PBC J1446.6-6416	IGR J14471-6414	Sy1	221.743	-64.284	3.96	3.35	6.73	1.2 ± 0.8	0.5 ± 0.1	0.0530	43.89	1.35	3 Y l a	I f
774	**2PBC J1448.7-5942**	PBCX J144843.3-594215	X	222.178	-59.710	3.79	0.34	7.25	0.7 ± 0.4	< 0.09	...	...	2.07	2 N l a	I
775	**2PBC J1448.8-4008**	...	...	222.202	-40.144	5.07	...	4.89	0.8 ± 0.5	0.2 ± 0.1	...	...	1.39	3 N h	
776	2PBC J1449.0-5533	IGR J14493-5534	AGN	222.250	-55.594	3.33	1.93	9.09	2.5 ± 1.4	0.39 ± 0.05	...	...	1.66	1 Y l a	I
777	**2PBC J1449.2+0405**	...	...	222.318	4.097	4.98	...	5.04	0.7 ± 0.4	0.4 ± 0.2	...	...	1.83	1 N l	
778	2PBC J1451.2-5539	IGR J14515-5542	Sy2	222.790	-55.660	2.32	3.46	17.60	4.0 ± 0.5	0.42 ± 0.03	0.0180	43.46	1.89	3 Y l a	I b
779	2PBC J1453.0+2553	RX J1453.1+2554	Sy1	223.277	25.905	2.88	0.40	11.77	1.9 ± 1.1	0.42 ± 0.06	...	...	1.91	3 Y h a	b
780	2PBC J1453.5-5522	IGR J14536-5522	CV*	223.375	-55.399	3.29	2.75	9.29	1.5 ± 0.8	0.18 ± 0.06	...	...	1.62	3 Y l a	I b
781	2PBC J1455.1-5132	IGR J14552-5133	Sy1	223.812	-51.582	3.49	0.78	8.37	1.9 ± 1.1	0.38 ± 0.07	0.0160	43.04	1.50	1 Y h a	I f
782	2PBC J1457.8-4306	IC 4518A	Sy2	224.447	-43.141	2.55	1.34	14.68	2.9 ± 0.7	0.28 ± 0.04	0.0160	43.22	1.46	3 Y h a	I
783	**2PBC J1500.5-1933**	...	...	225.139	-19.551	5.00	...	5.01	0.8 ± 2.3	0.2 ± 0.1	...	...	1.71	3 N h	
784	2PBC J1503.9+1027	Mrk 841	Sy1	225.992	10.449	2.46	1.01	15.67	2.9 ± 0.6	0.40 ± 0.04	0.0364	43.95	2.04	3 Y h a	I b
785	**2PBC J1506.2+0345**	Mrk 1392	Sy1	226.572	3.760	4.59	6.07	5.25	1.5 ± 0.9	0.5 ± 0.1	0.0361	43.64	1.01	3 N l b	f
786	2PBC J1506.6+0349	2MASX J15064412+0351444	Sy2	226.642	3.826	3.79	3.33	7.24	1.6 ± 1.1	0.6 ± 0.1	...	...	1.77	1 Y h a	
787	**2PBC J1508.5-4952**	...	...	227.142	-49.882	4.23	...	6.02	1.7 ± 1.1	0.7 ± 0.1	...	...	1.54	1 N h	
788	**2PBC J1508.7-0011**	Mrk 1393	Sy1	227.192	-0.185	4.81	2.10	4.85	1.1 ± 0.7	0.4 ± 0.1	0.0542	43.90	1.76	3 N h a	f
789	**2PBC J1509.4-6649**	IGR J15094-6649	CV*	227.366	-66.829	2.55	0.38	14.67	2.1 ± 0.7	0.18 ± 0.04	...	...	1.64	3 N h b	I b
790	2PBC J1510.8+0545	ABELL 2029	ClG	227.734	5.762	3.42	0.64	8.65	1.0 ± 0.5	< 0.07	0.0774	44.23	1.73	2 Y h a	
791	2PBC J1512.0-2118	RBS 1473	Sy1	228.008	-21.313	2.87	0.52	11.84	2.7 ± 0.9	0.28 ± 0.04	0.0443	44.10	1.91	3 Y h a	I b
792	2PBC J1512.8-0906	PKS 1510-08	BZQ	228.206	-9.086	2.33	0.86	17.44	5.0 ± 2.5	0.56 ± 0.04	0.3600	46.27	1.97	1 Y h a	f F
793	2PBC J1513.8-5909	PSR B1509-58	Psr	228.484	-59.152	1.11	0.88	94.30	21.9 ± 0.4	0.441 ± 0.006	...	...	1.64	1 Y l a	I b
794	2PBC J1513.8-8123	2MASX J15144217-8123377	Sy1	228.592	-81.398	3.03	0.77	10.75	2.0 ± 1.0	0.41 ± 0.06	0.0683	44.36	1.38	3 Y h a	
795	**2PBC J1514.7-4021**	6dFGS gJ151448.7-402153	G	228.684	-40.366	4.55	0.88	5.32	0.9 ± 0.6	0.4 ± 0.2	0.0237	43.05	1.49	1 N h a	I b
796	2PBC J1515.2+4202	NGC 5899	LIN	228.747	42.057	3.29	0.86	9.26	1.4 ± 0.8	0.39 ± 0.07	0.0085	42.36	1.62	1 Y h a	
		PBCX J151509.1+420826	X				5.36				...	...			
797	2PBC J1517.7-2419	Ap Lib	BZB	229.458	-24.371	4.30	1.83	5.84	1.9 ± 1.1	0.48 ± 0.10	0.0490	44.02	1.39	1 Y h a	b F
798	**2PBC J1519.4+6536**	MCG+11-19-006	Sy2	229.854	65.604	3.91	0.94	6.87	0.9 ± 0.5	0.3 ± 0.1	0.0440	43.61	1.49	3 N h a	
799	**2PBC J1520.2-0433**	1RXS J152017.4-043621	X	230.066	-4.555	4.78	3.07	4.90	0.7 ± 0.4	0.3 ± 0.2	...	...	1.23	1 N h b	b
800	2PBC J1520.6-5710	Cir X-1	LXB	230.162	-57.174	1.41	0.49	50.15	4.3 ± 0.5	0.04 ± 0.01	...	...	12.77	2 Y l a	I b
801	2PBC J1533.4-0844	1E 1530-085	Sy2	233.357	-8.724	2.80	1.87	12.40	3.4 ± 1.1	0.43 ± 0.05	0.0230	43.61	1.89	1 Y h a	
802	2PBC J1536.0+5754	Mrk 290	Sy1	234.012	57.886	2.35	1.71	17.11	2.2 ± 0.6	0.40 ± 0.05	0.0296	43.64	1.43	1 Y h a	b
803	2PBC J1536.1-5749	IGR J15360-5750	X	234.048	-57.827	3.91	1.64	6.88	2.2 ± 1.2	0.43 ± 0.06	...	...	1.53	3 Y l a	I
804	**2PBC J1538.0+6744**	...	...	234.525	67.744	4.95	...	5.08	0.6 ± 0.4	0.4 ± 0.1	...	...	1.44	3 N h	
805	**2PBC J1539.1-6228**	SWIFT J1539.2-6227	X	234.779	-62.478	2.69	0.90	13.29	2.4 ± 0.6	0.38 ± 0.05	...	...	8.63	3 N h a	
806	**2PBC J1540.3+1415**	1RXS J154009.4+141116	X	235.083	14.258	4.60	4.92	5.24	0.9 ± 0.5	0.3 ± 0.1	...	...	1.38	3 N l a	b
807	**2PBC J1541.7-5030**	...	...	235.425	-50.507	5.02	...	4.98	0.9 ± 0.5	0.4 ± 0.1	...	...	1.89	3 N l	
808	2PBC J1542.4-5222	H 1538-522	HXB	235.612	-52.373	0.93	0.96	166.91	27.6 ± 0.3	0.109 ± 0.003	...	...	4.58	2 Y l a	I b
809	2PBC J1546.5+6931	2MASX J15462424+6929102	G	236.656	69.485	4.02	1.94	6.54	0.5 ± 0.3	0.2 ± 0.1	...	...	1.62	1 Y h a	
		1RXS J154534.5+692925	X				5.51				...	...			
810	**2PBC J1547.3-6409**	...	...	236.838	-64.161	4.65	...	5.13	0.8 ± 0.4	0.3 ± 0.1	...	...	1.57	3 N h	
811	**2PBC J1547.3+3144**	...	...	236.841	31.748	5.00	...	5.01	0.6 ± 0.3	0.2 ± 0.1	...	...	1.60	3 N h	
812	2PBC J1547.3+2050	4C 21.45	Sy1	236.873	20.875	3.97	3.31	6.69	0.6 ± 0.4	0.2 ± 0.1	0.2640	45.27	1.79	3 Y h a	b
813	2PBC J1547.9-6233	4U 1543-624	LXB	237.013	-62.566	1.52	0.97	42.03	4.5 ± 0.4	0.05 ± 0.01	...	...	1.58	2 Y h a	I b
814	2PBC J1548.1-4528	IGR J15479-4529	CV*	237.045	-45.473	1.53	0.75	41.76	8.3 ± 0.3	0.29 ± 0.01	...	...	1.88	3 Y h a	I b
815	2PBC J1548.4-1344	NGC 5995	Sy2	237.107	-13.759	3.25	0.17	9.48	3.7 ± 0.6	0.37 ± 0.04	0.0250	43.72	1.53	3 Y h a	I b
816	**2PBC J1548.5-3208**	ESO 450-16	G	237.148	-32.150	4.77	2.39	4.92	0.8 ± 0.5	0.3 ± 0.1	0.0488	43.67	1.85	3 N h a	b
817	**2PBC J1550.7-5418**	SGR J1550-5418	Psr	237.675	-54.305	3.10	1.75	10.29	3.0 ± 1.8	0.54 ± 0.06	...	...	4.58	1 N l a	I
818	**2PBC J1553.4+2348**	2MASX J15534361+2348259	G	238.371	23.811	4.19	3.32	6.12	1.2 ± 0.7	0.38 ± 0.09	0.1150	44.62	1.88	3 N h a	f
819	**2PBC J1554.6+3242**	2MASX J15541741+3238381	AGN	238.651	32.711	4.53	5.64	5.35	1.0 ± 0.5	0.4 ± 0.1	0.0483	43.72	1.41	1 N h a	b
820	**2PBC J1554.6-3734**	...	...	238.668	-37.572	4.84	...	4.81	1.1 ± 0.6	0.4 ± 0.1	...	...	1.95	1 N h	
821	**2PBC J1555.0-6225**	...	...	238.755	-62.418	4.52	...	5.39	1.0 ± 0.6	0.4 ± 0.1	...	...	1.44	3 N h	
822	2PBC J1555.5+1109	PG 1553+113	BZB	238.887	11.209	4.40	2.75	5.63	0.7 ± 0.4	0.3 ± 0.1	...	...	1.46	2 Y h a	b F
823	**2PBC J1557.6-7913**	PKS 1549-79	BZU	239.402	-79.230	3.95	1.78	6.75	1.1 ± 0.6	0.36 ± 0.09	0.1495	44.83	1.53	3 N h a	
824	2PBC J1557.7-5425	H 1553-542	HXB	239.440	-54.412	2.39	0.53	16.63	1.9 ± 1.0	< 0.04	...	...	7.36	2 Y l a	
825	2PBC J1558.4+2713	ABELL 2142	ClG	239.607	27.231	2.65	2.14	13.67	1.5 ± 0.8	0.18 ± 0.04	0.0899	44.54	1.64	1 Y h a	
826	2PBC J1559.4+2556	T CrB	Sy*	239.886	25.923	1.62	0.56	36.71	5.9 ± 0.3	0.26 ± 0.02	...	...	1.61	3 Y h a	
827	2PBC J1601.0-6044	1H 1556-605	LXB	240.243	-60.760	2.56	1.40	14.57	1.2 ± 0.6	< 0.05	...	...	1.40	2 Y h a	I b
828	**2PBC J1601.8-6103**	LEDA 2801977	AG?	240.455	-61.054	4.98	5.64	5.04	0.8 ± 0.5	0.3 ± 0.1	0.0117	42.38	1.41	2 N h a	I b

Table 2. continued.

	PBC name	ID	Type[a]	RA (deg)	Dec (deg)	Error radius (arcmin)	Offset (arcmin)	SNR	Flux[b] (erg cm^{-2} s^{-1})	Hardness ratio (R_{30-150}/R_{14-150})	Redshift	log L_{14-150}[c] (erg s^{-1})	Var	Flag 1[d] A B C D	Flag 2[e] I R F
829	**2PBC J1602.3-7544**	CIZA J1601.7-7544	ClG	240.591	-75.744	4.75	2.17	4.95	0.6 ± 0.4	0.2 ± 0.1	0.1530	44.62	1.55	3 N h a	b
830	**2PBC J1606.0-7250**	...	...	241.503	-72.842	2.90	...	11.59	2.0 ± 1.1	0.41 ± 0.06	...	...	1.44	3 N h	
831	**2PBC J1608.8+8501**	8C 1616+851	Sy1	242.212	85.029	4.12	1.89	6.28	1.0 ± 0.7	0.5 ± 0.1	0.1830	44.98	1.55	1 N h a	f
832	2PBC J1612.1-6037	IGR J16119-6036	Sy1	243.033	-60.642	2.92	2.10	11.49	2.6 ± 0.6	0.33 ± 0.04	0.0158	43.17	1.30	1 Y h a	I
833	2PBC J1612.7-5225	H 1608-522	LXB	243.185	-52.424	0.76	0.22	389.66	73.7 ± 0.3	0.328 ± 0.001	...	...	105.95	3 Y l a	I
834	2PBC J1614.1+6542	Mrk 876	Sy1	243.547	65.726	3.33	1.51	9.05	1.0 ± 0.6	0.33 ± 0.09	0.1200	44.60	1.51	3 Y h a	b
835	2PBC J1614.4-6050	ABELL 3627	ClG	243.572	-60.852	3.42	1.16	8.66	0.9 ± 0.5	< 0.08	0.0162	42.72	1.50	2 Y h a	
836	**2PBC J1615.5+3218**	...	...	243.879	32.301	4.74	...	4.98	0.6 ± 0.3	0.3 ± 0.1	...	...	1.45	2 N h	
837	2PBC J1616.5-4957	IGR J16167-4957	CV*	244.143	-49.989	2.64	0.82	13.79	2.4 ± 0.7	0.20 ± 0.04	...	...	1.47	3 Y l a	I b
838	2PBC J1617.8+3224	4C 32.51	Sy1	244.445	32.417	2.93	2.63	11.42	1.7 ± 1.0	0.44 ± 0.08	0.1517	45.01	1.69	1 Y h a	f
839	**2PBC J1618.1-5405**	...	...	244.533	-54.097	4.73	...	4.99	1.0 ± 0.7	0.4 ± 0.1	...	...	1.61	1 N l	
840	2PBC J1618.5-5926	WKK 6471	Sy1	244.659	-59.433	3.87	1.34	6.98	1.4 ± 0.8	0.48 ± 0.09	0.0350	43.60	1.47	1 Y h a	I b
841	2PBC J1619.5-4946	IGR J16195-4945	HX?	244.843	-49.765	2.41	2.14	16.31	2.8 ± 0.5	0.20 ± 0.03	...	...	1.84	3 Y l a	I
842	2PBC J1620.3+8101	MCG+14-08-004	Sy2	244.876	81.035	3.06	0.81	10.56	1.3 ± 0.7	0.33 ± 0.07	...	...	1.49	1 Y h a	
843	2PBC J1619.5-2807	IGR J16194-2810	LXB	244.882	-28.127	2.76	2.33	12.71	2.7 ± 0.7	0.26 ± 0.04	...	...	1.91	3 Y h a	I
844	2PBC J1619.9-1538	Sco X-1	LXB	244.971	-15.638	0.58	0.48	4374.13	1328.8 ± 0.5	0.0098 ± 0.0001	...	...	9.73	2 Y h a	I
845	2PBC J1620.8-5130	IGR J16207-5129	HXB	245.188	-51.518	2.02	0.97	22.99	4.1 ± 0.4	0.28 ± 0.02	...	...	1.70	3 Y l a	I
846	**2PBC J1624.4-3313**	1RXS J162354.8-331230	X	246.105	-33.220	4.56	6.40	5.30	0.9 ± 0.5	0.2 ± 0.1	...	...	1.59	3 N l b	b
847	**2PBC J1625.5+8530**	VII Zw 653	Sy1	246.495	85.475	3.92	1.33	6.83	0.7 ± 0.4	0.3 ± 0.1	0.0629	43.83	1.47	1 N h b	b
848	**2PBC J1626.0+4351**	87GB 162418.8+435342	BZQ	246.505	43.854	4.56	4.26	5.30	0.5 ± 0.3	0.2 ± 0.2	1.0480	46.75	1.50	3 N h a	b
849	2PBC J1626.0-2952	PKS 1622-29	BZU	246.540	-29.819	4.17	2.44	6.16	2.1 ± 1.3	0.51 ± 0.08	0.8149	46.72	1.71	1 Y h a	f F
850	2PBC J1626.5-5155	SWIFT J1626.6-5156	HXB	246.657	-51.937	2.10	0.37	21.34	2.9 ± 0.7	0.09 ± 0.03	...	...	6.62	2 Y l a	I
851	2PBC J1627.9-4911	H 1624-490	LXB	247.027	-49.175	1.24	1.55	69.71	6.5 ± 0.5	0.027 ± 0.009	...	...	1.95	2 Y l a	I b
852	2PBC J1628.0+5145	Mrk 1498	Sy1	247.040	51.769	1.98	0.91	23.92	3.9 ± 0.4	0.39 ± 0.03	0.0556	44.45	1.82	3 Y h a	
853	2PBC J1628.1-4839	IGR J16283-4838	HXB	247.069	-48.650	2.11	0.96	21.11	3.2 ± 0.6	0.17 ± 0.03	...	...	4.04	3 Y l a	I
854	**2PBC J1628.6-5025**	IGR J16287-5021	gam	247.171	-50.431	4.56	3.93	5.31	0.8 ± 0.4	< 0.1	...	...	1.52	2 N l a	I
855	**2PBC J1630.5+3924**	2MASX J16303265+3923031	Sy2	247.626	39.409	4.36	1.55	5.72	1.0 ± 0.7	0.5 ± 0.1	0.0300	43.32	1.65	1 N h a	
856	2PBC J1631.7-4848	IGR J16318-4848	HXB	247.906	-48.810	0.85	1.81	230.15	45.3 ± 0.3	0.269 ± 0.002	...	...	26.32	3 Y l a	I
857	**2PBC J1631.9-5616**	...	...	247.981	-56.272	5.07	...	4.89	0.6 ± 0.3	0.2 ± 0.1	...	...	1.55	3 N h	
858	2PBC J1632.0-4751	IGR J16320-4751	HXB	248.016	-47.854	0.91	1.26	173.70	31.3 ± 0.3	0.173 ± 0.003	...	...	15.88	3 Y l a	I
859	2PBC J1632.2-6727	4U 1626-67	LXB	248.077	-67.468	0.81	0.40	282.46	32.8 ± 0.2	0.062 ± 0.002	...	...	23.75	2 Y h a	I b
860	2PBC J1632.7-4727	IGR J16328-4726	gam	248.301	-47.501	2.51	5.86	15.11	3.2 ± 0.8	0.31 ± 0.03	...	...	1.92	3 Y l a	I
861	**2PBC J1635.1-5804**	ESO 137-34	Sy2	248.780	-58.082	4.17	0.88	6.16	1.8 ± 1.1	0.55 ± 0.10	0.0091	42.51	1.72	3 N h a	I
862	2PBC J1638.5-6421	TRIANGULUM A	ClG	249.598	-64.365	2.41	1.36	16.32	1.8 ± 0.9	0.06 ± 0.04	0.0500	44.06	1.57	2 Y h a	I b
863	2PBC J1638.5-2058	1RXSJ163830.9-205520	AGN	249.622	-20.944	4.59	1.26	5.24	1.8 ± 1.0	0.40 ± 0.08	0.0269	43.47	2.26	3 Y h a	I b
864	2PBC J1639.1-4641	IGR J16393-4643	HXB	249.796	-46.693	1.43	1.15	48.41	8.1 ± 0.3	0.073 ± 0.009	...	...	2.45	2 Y l a	I
865	**2PBC J1639.8-5611**	...	...	249.960	-56.193	4.85	...	5.27	0.5 ± 0.3	0.2 ± 0.1	...	...	1.75	2 N h	
866	2PBC J1640.9-5344	H 1636-536	LXB	250.242	-53.745	0.86	0.53	218.20	32.1 ± 0.3	0.171 ± 0.002	...	...	31.98	2 Y l a	I b
867	2PBC J1641.7-4532	IGR J16418-4532	HXB	250.449	-45.542	1.71	0.59	32.57	6.7 ± 0.4	0.14 ± 0.01	...	...	2.46	2 Y l a	I
868	2PBC J1643.0+3951	4C 39.48	BZQ	250.742	39.809	2.97	0.17	11.15	2.2 ± 1.3	0.59 ± 0.07	0.5930	46.39	1.40	1 Y h a	b
869	2PBC J1645.8-4536	GX 340+0	LXB	251.447	-45.588	0.73	1.37	465.31	54.4 ± 0.2	0.019 ± 0.001	...	...	28.00	2 Y l a	I b
870	2PBC J1648.2-4511	IGR J16479-4514	HXB	251.963	-45.230	1.75	3.18	31.14	7.1 ± 0.3	0.21 ± 0.01	...	...	3.74	3 Y l a	I
871	2PBC J1648.3-3034	IGR J16482-3036	Sy1	252.055	-30.587	2.82	0.80	12.22	3.9 ± 1.4	0.48 ± 0.04	0.0310	43.92	2.08	1 Y h a	I
872	**2PBC J1649.3-1739**	...	...	252.336	-17.655	4.81	...	4.85	1.4 ± 0.8	0.31 ± 0.08	...	...	1.83	3 N h	
873	2PBC J1649.4-4349	IGR J16493-4348	LX?	252.364	-43.827	2.13	0.49	20.79	4.3 ± 0.4	0.28 ± 0.02	...	...	2.08	3 Y l a	I
874	2PBC J1649.8-3305	IGR J16500-3307	CV*	252.461	-33.115	3.36	2.17	8.93	2.2 ± 0.7	0.29 ± 0.05	...	...	1.76	3 Y h a	I
875	2PBC J1650.6+0434	2MASX J16504275+0436180	Sy2	252.663	4.589	3.60	1.31	7.91	2.1 ± 1.3	0.48 ± 0.08	0.0320	43.68	1.62	3 Y h a	I
876	2PBC J1651.9-5914	ESO 138-1	Sy2	252.924	-59.250	2.76	2.95	12.68	2.3 ± 0.5	0.31 ± 0.05	0.0091	42.63	1.50	3 Y h a	I
877	2PBC J1652.2+5554	MCG+09-28-001	Sy2	253.070	55.920	3.26	0.90	9.44	1.4 ± 0.8	0.39 ± 0.07	0.0290	43.44	1.64	1 Y h a	
878	2PBC J1653.0+0223	NGC 6240	LIN	253.261	2.396	1.90	0.92	26.13	6.4 ± 0.5	0.47 ± 0.03	0.0243	43.93	1.63	1 Y h a	I b
879	2PBC J1653.8+3945	Mrk 501	BZB	253.447	39.769	1.90	1.08	26.05	4.2 ± 0.3	0.29 ± 0.02	0.0336	44.04	2.50	3 Y h a	I b F
880	2PBC J1653.9-3950	GRO J1655-40	LXB	253.499	-39.848	1.45	0.15	47.35	11.8 ± 0.3	0.36 ± 0.01	...	...	25.29	3 Y l a	I
881	**2PBC J1654.7-1914**	1RXS J165443.5-191620	X	253.675	-19.246	4.05	1.82	6.47	1.4 ± 0.8	0.12 ± 0.07	...	...	1.37	3 N h a	I b
882	2PBC J1656.0-5202	IGR J16558-5203	Sy1	254.032	-52.062	2.23	0.32	18.98	3.7 ± 0.5	0.39 ± 0.03	0.0540	44.41	1.51	3 Y h a	I b
883	2PBC J1656.2-3303	SWIFT J1656.3-3302	QSO	254.060	-33.047	2.20	0.80	19.43	6.0 ± 1.7	0.54 ± 0.03	2.4000	48.17	2.16	3 Y h a	I f ?
884	2PBC J1657.8+3520	Her X-1	LXB	254.457	35.339	0.68	0.18	749.72	84.8 ± 0.2	0.0822 ± 0.0009	...	...	93.55	2 Y h a	I b
885	2PBC J1700.2-4221	AX J1700.2-4220	HXB	255.079	-42.299	2.94	2.47	11.30	2.6 ± 0.6	0.27 ± 0.05	...	...	2.27	3 Y l a	I
886	2PBC J1700.8-4139	OAO 1657-415	HXB	255.206	-41.664	0.76	0.48	388.57	92.9 ± 0.3	0.247 ± 0.001	...	...	77.59	1 Y l a	I
887	2PBC J1701.0-4610	XTE J1701-462	LXB	255.255	-46.184	1.08	0.48	100.62	12.0 ± 0.2	0.010 ± 0.005	...	...	54.69	2 Y l a	I
888	**2PBC J1701.0+2923**	MCG+05-40-026	Sy2	255.256	29.389	4.60	1.73	5.22	0.7 ± 0.4	0.3 ± 0.1	0.0361	43.33	1.74	2 N h a	b
889	**2PBC J1701.6-4307**	...	...	255.413	-43.124	4.56	...	5.31	0.9 ± 0.5	0.2 ± 0.1	...	...	1.56	1 N l	

Table 2. continued.

	PBC name	ID	Type[a]	RA (deg)	Dec (deg)	Error radius (arcmin)	Offset (arcmin)	SNR	Flux[b] (erg cm^{-2} s^{-1})	Hardness ratio (R_{30-150}/R_{14-150})	Redshift	log L_{14-150}[c] (erg s^{-1})	Var	Flag 1[d] A B C D	Flag 2[e] I R F
890	**2PBC J1701.7-4052**	XTE J1701-407	LXB	255.437	-40.868	2.35	0.57	17.14	4.2 ± 0.5	0.32 ± 0.03	...	...	8.15	1 N l a	I
891	2PBC J1702.8-4847	GX 339-4	LXB	255.716	-48.786	0.81	0.46	281.59	64.3 ± 0.3	0.444 ± 0.002	...	...	81.15	1 Y l a	I b
892	2PBC J1703.9-3750	4U 1700-377	HXB	255.981	-37.842	0.63	0.28	1355.45	313.0 ± 0.3	0.2522 ± 0.0003	...	...	28.75	3 Y l a	I b
893	**2PBC J1704.0-4431**	2MASS J17041207-4431311	IR	256.012	-44.533	4.99	1.71	5.03	0.6 ± 0.4	0.2 ± 0.1	...	...	1.91	2 N l a	f
894	2PBC J1704.0+7836	ABELL 2256	ClG	256.072	78.630	3.31	5.49	9.18	0.4 ± 0.2	< 0.2	0.0581	43.61	1.58	2 Y h a	
895	2PBC J1705.7-3625	GX 349+2	LXB	256.447	-36.421	0.67	0.55	805.27	80.1 ± 0.2	0.0051 ± 0.0007	...	...	5.12	2 Y l a	I b
896	2PBC J1706.2-4302	H 1702-429	LXB	256.559	-43.043	0.86	0.47	217.95	43.9 ± 0.3	0.269 ± 0.002	...	...	46.43	3 Y l a	I
897	2PBC J1706.2-6143	SWIFT J1706.6-6146	X	256.573	-61.714	1.61	0.18	36.90	7.2 ± 0.3	0.36 ± 0.02	...	...	2.10	3 Y h a	I
898	2PBC J1706.5+2358	4U 1700+24	LXB	256.655	23.992	2.88	1.37	11.78	2.1 ± 0.8	0.26 ± 0.05	...	...	3.30	3 Y h a	b
899	**2PBC J1708.7-4009**	RX J170849.0-400910	XB*	257.176	-40.155	3.57	1.28	8.04	3.0 ± 1.9	0.59 ± 0.07	...	...	1.68	1 N l a	I b
900	2PBC J1708.8-3219	4U 1705-32	LXB	257.212	-32.323	2.70	0.89	13.19	3.5 ± 0.7	0.37 ± 0.03	...	...	2.13	3 Y l a	I
901	2PBC J1708.8-4406	H 1705-440	LXB	257.225	-44.110	0.83	0.50	247.95	29.7 ± 0.2	0.089 ± 0.002	...	...	29.96	3 Y l a	I
902	2PBC J1709.4-3624	IGR J17091-3624	BH?	257.352	-36.421	1.69	5.56	33.42	8.1 ± 0.4	0.39 ± 0.02	...	...	10.42	1 Y l a	I
903	**2PBC J1709.5-2639**	RX J1709.5-2639	LXB	257.391	-26.665	2.85	0.93	12.00	3.1 ± 0.8	0.41 ± 0.04	...	...	4.81	1 N h b	I b
904	**2PBC J1709.7-2349**	1RXS J170944.9-234658	X	257.439	-23.820	4.81	2.22	4.86	1.0 ± 0.6	0.3 ± 0.1	...	...	1.79	3 N h a	b
905	2PBC J1710.2-2807	XTE J1710-281	LXB	257.538	-28.122	2.20	0.93	19.52	4.7 ± 0.4	0.29 ± 0.02	...	...	2.20	1 Y h a	I b
906	**2PBC J1711.8-3933**	TeV J1712-3932	gam	257.972	-39.559	4.62	3.76	5.19	1.1 ± 0.6	0.24 ± 0.09	...	...	2.19	3 N l b	
907	2PBC J1712.3-2320	Oph Cluster	ClG	258.093	-23.353	1.50	1.04	43.75	7.3 ± 0.3	0.065 ± 0.009	0.0280	44.14	2.02	2 Y h a	I b
908	2PBC J1712.4-4050	4U 1708-40	LXB	258.136	-40.839	2.73	1.67	12.94	1.5 ± 0.9	0.14 ± 0.03	...	...	1.57	2 Y l a	I b
909	2PBC J1712.6-3737	SAX J1712.6-3739	LXB	258.144	-37.650	1.55	0.40	40.20	8.8 ± 0.4	0.24 ± 0.01	...	...	3.55	3 Y l a	I b
910	2PBC J1712.6-2415	V2400 Oph	DQ*	258.162	-24.258	2.11	0.91	21.11	4.2 ± 0.4	0.13 ± 0.02	...	...	1.75	3 Y h a	I b
911	**2PBC J1715.2-5448**	1RXS J171535.6-545015	X	258.821	-54.810	4.94	3.14	5.10	0.8 ± 0.5	0.3 ± 0.1	...	...	1.48	3 N h b	b
912	2PBC J1717.1-6249	NGC 6300	Sy2	259.272	-62.834	1.51	1.12	43.23	8.3 ± 0.3	0.38 ± 0.01	0.0037	42.40	1.59	1 Y h a	I
913	2PBC J1719.5+4858	Arp 102B	BZU	259.881	48.992	3.07	2.86	10.46	2.1 ± 1.2	0.41 ± 0.05	0.0250	43.48	1.25	1 Y h a	I b
914	2PBC J1719.6-4100	IGR J17195-4100	CV*	259.918	-41.021	2.34	0.90	17.30	3.9 ± 0.5	0.18 ± 0.02	...	...	1.59	2 Y l a	I b
915	2PBC J1720.1-3116	IGR J17200-3116	HXB	260.035	-31.282	2.93	0.53	11.41	2.7 ± 0.8	0.08 ± 0.03	...	...	1.75	2 Y l a	I b
916	**2PBC J1720.1-5146**	1RXS J172032.0-514414	X	260.045	-51.778	4.16	4.06	6.18	0.9 ± 0.5	0.18 ± 0.09	...	...	1.77	2 N h b	b
917	**2PBC J1721.8+4315**	FIRST J172201.9+431523	Sy1	260.465	43.256	4.34	1.88	5.76	0.8 ± 0.5	0.4 ± 0.1	0.1390	44.64	1.51	1 N h a	b
918	**2PBC J1722.8-1247**	V* RY Ser	CV*	260.723	-12.793	4.93	3.39	5.12	1.0 ± 0.6	0.20 ± 0.10	...	...	1.89	1 N h b	f
919	**2PBC J1723.2+3417**	4C 34.47	Sy1	260.815	34.288	3.77	1.28	7.31	1.0 ± 0.6	0.26 ± 0.09	0.2059	45.14	1.75	2 N h a	b
920	**2PBC J1723.5+3631**	RBS 1645	Sy1	260.856	36.506	3.44	0.49	8.55	1.3 ± 0.7	0.28 ± 0.07	0.0400	43.69	1.49	1 N h b	b
921	2PBC J1725.2-3616	IGR J17252-3616	HXB	261.311	-36.270	1.43	1.04	49.04	10.2 ± 0.3	0.144 ± 0.009	...	...	5.26	3 Y l a	I ?
922	2PBC J1725.5-3256	IGR J17254-3257	LXB	261.368	-32.936	2.65	1.29	13.66	3.5 ± 0.6	0.32 ± 0.03	...	...	1.68	3 Y l a	I b
923	2PBC J1727.6-3047	4U 1722-30	LXB	261.895	-30.791	0.93	0.72	161.31	41.8 ± 0.3	0.310 ± 0.003	...	...	17.82	3 Y l a	I b
924	**2PBC J1729.4-0312**	...	...	262.351	-3.203	5.03	...	4.96	0.6 ± 0.3	0.2 ± 0.1	...	...	1.68	2 N h	
925	2PBC J1730.3-0559	IGR J17303-0601	CV*	262.581	-6.002	2.02	0.76	23.12	6.5 ± 0.4	0.33 ± 0.02	...	...	1.58	1 Y h a	I b
926	2PBC J1731.7-1657	3A 1728-169	LXB	262.933	-16.957	0.84	0.30	242.68	24.3 ± 0.2	0.008 ± 0.002	...	...	2.78	2 Y h a	I b
927	**2PBC J1731.9-1914**	NOVA Oph 1998	No*	262.978	-19.248	4.24	1.51	5.98	1.4 ± 0.8	0.38 ± 0.09	...	...	1.44	3 N h a	I b
928	2PBC J1731.9-3349	GX 354-0	LXB	262.993	-33.814	0.74	1.27	429.27	85.0 ± 0.3	0.186 ± 0.001	...	...	69.66	3 Y l a	I b
929	2PBC J1732.0-2444	GX 1+4	LXB	263.007	-24.736	0.74	0.57	436.34	102.3 ± 0.3	0.345 ± 0.001	...	...	90.49	1 Y l a	I f
930	**2PBC J1733.4-3322**	RAPID BURSTER	LXB	263.375	-33.377	2.24	1.37	18.83	2.9 ± 0.7	0.12 ± 0.02	...	...	8.08	2 N l a	I
931	**2PBC J1734.8-2043**	IGR J17348-2045	gam	263.721	-20.732	4.56	1.58	5.31	0.9 ± 0.5	0.25 ± 0.10	...	...	1.49	1 N h b	I
		[KRL2007b] 249	gam				1.74				...	...			
932	2PBC J1735.4-3256	IGR J17354-3255	gam	263.867	-32.939	2.81	1.47	12.27	2.1 ± 1.2	0.24 ± 0.05	...	...	2.45	3 Y l a	I
933	2PBC J1735.7+2047	MCG+03-45-003	Sy2	263.915	20.804	3.45	1.65	8.54	1.7 ± 1.0	0.40 ± 0.07	0.0241	43.35	1.66	1 Y h b	
934	2PBC J1737.4-2908	GRS 1734-292	Sy1	264.377	-29.153	1.65	1.20	35.32	10.1 ± 0.4	0.37 ± 0.01	0.0214	44.02	2.24	3 Y l a	I b
935	2PBC J1737.7-5953	ESO 139-12	Sy2	264.456	-59.904	3.62	2.57	7.84	1.6 ± 0.9	0.40 ± 0.08	0.0174	43.04	1.73	1 Y h a	
936	2PBC J1738.2-2700	SLX 1735-269	LXB	264.575	-26.993	1.12	0.17	91.40	21.8 ± 0.4	0.345 ± 0.006	...	...	2.99	1 Y l a	I b ?
937	2PBC J1738.9-4427	4U 1735-444	LXB	264.739	-44.455	0.78	0.31	342.86	34.8 ± 0.2	0.015 ± 0.002	...	...	19.38	2 Y h a	I b
938	**2PBC J1739.1-3022**	XTE J17391-3021	HXB	264.793	-30.378	4.53	2.04	5.37	1.4 ± 0.8	0.23 ± 0.08	...	...	2.60	2 N l a	I
939	**2PBC J1740.2-2840**	...	...	265.050	-28.669	4.78	...	4.91	1.2 ± 0.7	0.26 ± 0.10	...	...	2.11	3 N l	
940	**2PBC J1740.3-3654**	IGR J17404-3655	XB*	265.091	-36.913	4.37	1.23	5.70	1.1 ± 0.6	0.3 ± 0.1	...	...	1.63	3 N l a	I f
941	2PBC J1740.6-2819	SLX 1737-282	LXB	265.156	-28.330	1.76	2.02	30.69	7.7 ± 0.5	0.32 ± 0.02	...	...	2.55	1 Y l a	I
942	2PBC J1741.3+0349	RX J1741.4+0348	Sy1	265.353	3.834	4.56	1.53	5.30	1.6 ± 1.0	0.48 ± 0.10	0.0300	43.52	1.80	3 Y h a	b
943	2PBC J1741.8-1210	IGR J17418-1212	Sy1	265.495	-12.178	2.68	2.21	13.38	3.6 ± 0.9	0.43 ± 0.04	0.0370	44.05	1.83	1 Y h a	I
944	**2PBC J1742.0-6053**	1RXS J174201.5-605514	X	265.513	-60.888	4.58	1.94	5.27	0.9 ± 0.5	0.3 ± 0.1	0.4100	45.81	1.49	3 N h b	b
945	**2PBC J1742.2-5149**	1RXS J174219.0-514604	X	265.567	-51.817	5.02	2.99	4.98	0.7 ± 0.4	0.3 ± 0.1	...	...	1.96	1 N h a	f
946	**2PBC J1742.5+1838**	...	...	265.629	18.644	4.80	...	4.86	0.8 ± 0.5	0.20 ± 0.10	...	...	1.73	2 N h	
947	**2PBC J1743.0-3620**	[KRL2007b] 264	gam	265.741	-36.357	3.39	0.87	8.80	1.7 ± 0.9	0.27 ± 0.06	...	...	2.11	3 N l b	I
948	2PBC J1743.6+6252	2MASXJ17431735+6250207	Sy2	265.899	62.847	3.31	2.16	9.15	1.2 ± 0.7	0.32 ± 0.08	0.0335	43.49	1.47	1 Y h a	
949	2PBC J1744.0-2942	1E 1740.7-2942	LXB	266.034	-29.707	0.89	3.68	193.46	64.1 ± 0.4	0.440 ± 0.003	...	...	86.07	1 Y l a	I

Table 2. continued.

	PBC name	ID	Type[a]	RA (deg)	Dec (deg)	Error radius (arcmin)	Offset (arcmin)	SNR	Flux[b] (erg cm^{-2} s^{-1})	Hardness ratio (R_{30-150}/R_{14-150})	Redshift	log L_{14-150}[c] (erg s^{-1})	Var	Flag 1[d] A B C D	Flag 2[e] I R F
950	**2PBC J1744.7-2850**	CXOGC J174502.3-285450	LXB	266.181	-28.844	3.48	5.91	8.41	5.7 ± 0.6	0.22 ± 0.02	...	...	5.21	2 N l a	I
951	**2PBC J1744.8-3231**	IGR J17448-3232	gam	266.219	-32.517	4.56	3.44	5.30	1.2 ± 0.6	0.20 ± 0.07	...	...	1.86	3 N l a	I f
952	**2PBC J1745.7+2907**	SWIFT J1745.4+2906	X	266.439	29.121	3.80	1.91	7.22	1.4 ± 0.8	0.39 ± 0.08	0.1105	44.64	1.39	3 N h a	b
953	2PBC J1746.1-3214	IGR J17464-3213	LXB	266.551	-32.241	1.23	0.90	70.82	18.5 ± 0.3	0.400 ± 0.008	...	...	29.11	3 Y l a	I
954	2PBC J1745.7-2930	1A 1742-294	LXB	266.654	-29.521	1.23	6.84	71.14	15.2 ± 0.4	0.177 ± 0.006	...	...	12.21	2 Y l a	I b ?
955	2PBC J1746.2-2853	SAX J1747.0-2853	LXB	266.705	-28.814	1.63	5.08	36.38	12.3 ± 0.4	0.207 ± 0.008	...	...	3.23	3 Y l a	I
956	**2PBC J1746.8-2845**	CXOGCS J174621.05-284343	X	266.705	-28.755	1.68	6.36	33.98	10.1 ± 0.4	0.190 ± 0.010	...	...	1.69	2 N l a	I F
957	2PBC J1747.2-2721	IGR J17473-2721	gam	266.837	-27.345	0.97	0.62	141.41	43.1 ± 0.4	0.319 ± 0.003	...	...	48.84	1 Y l a	I
958	**2PBC J1747.4-3000**	1RXS J174726.8-300008	LXB	266.850	-30.013	1.27	0.91	64.70	15.2 ± 0.3	0.226 ± 0.007	...	...	4.14	3 N l a	I f
959	**2PBC J1747.6-2253**	2MASS J17472972-2252448	AG?	266.904	-22.884	4.55	1.70	5.32	1.5 ± 0.9	0.38 ± 0.08	...	...	1.92	1 N l a	I f
960	2PBC J1747.6-2820	CXOGCS J174742.4-282228	X	266.963	-28.365	3.11	1.98	10.21	4.5 ± 0.6	0.28 ± 0.03	...	...	1.72	2 Y l a	I ?
961	**2PBC J1748.0-3608**	[KRL2007b] 281	LXB	267.000	-36.142	4.63	4.07	5.17	0.8 ± 0.4	0.16 ± 0.09	...	...	3.20	2 N l b	I
962	**2PBC J1748.2+2721**	...	...	267.073	27.362	4.67	...	5.09	0.4 ± 0.2	< 0.2	...	...	1.52	2 N h	
963	2PBC J1748.1-2634	GX 3+1	LXB	267.078	-26.601	0.85	5.54	227.68	28.6 ± 0.3	0.020 ± 0.002	...	...	13.03	2 Y l a	I b
964	**2PBC J1748.6-2728**	[KRL2007b] 283	HX?	267.173	-27.482	4.38	0.33	5.67	5.6 ± 0.5	0.30 ± 0.02	...	...	1.82	3 N l a	I
965	2PBC J1748.7-3253	IGR J17488-3253	Sy1	267.212	-32.918	2.98	0.92	11.05	2.9 ± 1.0	0.38 ± 0.05	0.0200	43.42	2.01	3 Y l a	I b
966	2PBC J1749.1-2638	GRO J1750-27	HXB	267.291	-26.637	1.14	0.77	86.15	22.7 ± 0.3	0.039 ± 0.003	...	...	30.18	3 Y l a	I
967	2PBC J1749.4-2820	IGR J17497-2821	LXB	267.365	-28.329	1.92	2.77	25.68	8.1 ± 0.5	0.44 ± 0.02	...	...	10.72	1 Y l a	I
968	2PBC J1750.2-3703	1H 1746-370	LXB	267.546	-37.050	1.48	0.36	44.77	4.7 ± 0.4	0.02 ± 0.01	...	...	1.95	2 Y l a	I b
969	**2PBC J1750.4-2902**	AX J1750.5-2900	LXB	267.601	-29.047	2.06	0.51	22.22	5.4 ± 0.5	0.26 ± 0.02	...	...	17.57	1 N l a	I
970	2PBC J1750.9-3116	GRS 1747-312	LXB	267.705	-31.302	2.24	0.97	18.74	3.2 ± 0.7	0.24 ± 0.03	...	...	3.54	3 Y l a	I
971	2PBC J1753.4-0126	SWIFT J1753.5-0127	LXB	268.367	-1.446	0.71	0.35	567.72	156.9 ± 0.4	0.471 ± 0.001	...	...	140.97	1 Y h a	I
972	**2PBC J1754.4-2617**	IGR J17544-2619	HXB	268.616	-26.296	4.30	2.18	5.84	1.3 ± 0.7	0.19 ± 0.07	...	...	2.45	1 N l a	I b
973	2PBC J1758.5-2122	IGR J17586-2129	gam	269.657	-21.398	2.81	0.88	12.27	2.5 ± 0.9	0.18 ± 0.03	...	...	2.75	2 Y l a	I
974	2PBC J1759.7-2201	IGR J17597-2201	LXB	269.946	-22.008	2.58	1.24	14.35	3.3 ± 0.8	0.24 ± 0.03	...	...	2.41	1 Y l a	I
975	2PBC J1800.0+6634	NGC 6552	Sy2	269.996	66.597	3.35	1.35	8.96	1.4 ± 0.8	0.49 ± 0.10	0.0265	43.33	1.75	1 Y h a	
976	2PBC J1800.5+0810	V2301 OPH	NL*	270.153	8.183	3.34	0.80	9.05	1.3 ± 0.7	0.20 ± 0.06	...	...	2.03	3 Y h a	b
977	2PBC J1801.1-2505	GX 5-1	LXB	270.284	-25.112	0.68	1.97	772.97	83.6 ± 0.2	0.0144 ± 0.0007	...	...	30.17	2 Y l a	I b
978	2PBC J1801.2-2544	GRS 1758-258	LXB	270.297	-25.740	0.74	0.34	423.20	121.5 ± 0.4	0.468 ± 0.001	...	...	59.85	1 Y l a	I b
979	2PBC J1801.6-2030	GX 9+1	LXB	270.413	-20.507	0.77	2.06	349.65	35.0 ± 0.2	0.004 ± 0.002	...	...	5.48	2 Y l a	I b
980	2PBC J1802.7-1454	IGR J18027-1455	Sy1	270.692	-14.911	2.65	0.39	13.72	3.3 ± 0.9	0.39 ± 0.04	0.0350	43.97	1.88	3 Y l a	I
981	2PBC J1802.9-2016	IGR J18027-2016	HXB	270.698	-20.251	2.71	2.59	13.15	8.2 ± 0.3	0.114 ± 0.010	...	...	2.64	1 Y l a	I f
982	**2PBC J1804.7-1455**	IGR J18048-1455	HXB	271.176	-14.932	4.58	1.18	5.26	1.0 ± 1.5	0.12 ± 0.09	...	...	1.50	2 N l a	I
983	**2PBC J1807.3-5934**	...	...	271.828	-59.583	4.60	...	5.22	0.7 ± 0.4	0.14 ± 0.09	...	...	1.21	2 N h	f
984	**2PBC J1807.7+1122**	2MASX J18074992+1120494	G	271.942	11.375	3.97	2.01	6.70	1.6 ± 1.0	0.50 ± 0.10	...	...	1.80	1 N h a	b
985	2PBC J1807.9+0551	V* V426 Oph	DN*	271.977	5.850	2.96	1.03	11.19	1.4 ± 0.7	0.10 ± 0.05	...	...	1.83	2 Y h a	b
986	**2PBC J1808.3-3656**	V* V4580 Sgr	LXB	272.088	-36.938	3.72	2.75	7.47	1.6 ± 0.9	0.29 ± 0.06	...	...	4.81	3 N h a	
987	2PBC J1808.5-2025	SGR 1806-20	Psr	272.151	-20.415	2.69	0.73	13.27	4.9 ± 0.8	0.46 ± 0.03	...	...	1.86	1 Y l a	I
988	**2PBC J1809.7-6555**	2E 1804.8-6556	EmG	272.445	-65.932	4.66	0.87	5.12	0.8 ± 0.5	0.4 ± 0.1	0.1800	44.85	1.44	1 N h b	
989	**2PBC J1810.1-4552**	2MASX J18095784-4552413	BZU	272.537	-45.868	4.59	2.01	5.25	0.7 ± 0.4	0.3 ± 0.1	0.0696	43.93	1.54	3 N h a	
990	**2PBC J1810.3-1906**	SWIFT J181020.7-190411	X	272.593	-19.105	2.74	2.12	12.84	4.4 ± 0.5	0.38 ± 0.03	...	...	13.28	3 N l a	I f
991	2PBC J1810.6-2609	SAX J1810.8-2609	LXB	272.681	-26.160	2.02	0.65	23.13	5.3 ± 0.4	0.33 ± 0.02	...	...	11.04	3 Y l a	I
992	**2PBC J1811.2-1920**	SNR G011.2-00.3	SNR	272.810	-19.337	4.81	6.41	4.85	2.1 ± 1.2	0.46 ± 0.08	...	...	1.58	1 N l a	I b
993	**2PBC J1812.7-0648**	...	...	273.199	-6.805	4.70	...	5.03	1.3 ± 0.8	0.5 ± 0.1	...	...	1.56	1 N h	
994	2PBC J1813.6-1753	IGR J18135-1751	SNR	273.410	-17.867	3.12	2.94	10.16	3.4 ± 1.5	0.45 ± 0.04	...	...	1.74	1 Y l a	I
995	2PBC J1814.5-1709	GX 13+1	LXB	273.636	-17.150	0.92	0.52	173.29	21.9 ± 0.3	0.042 ± 0.003	...	...	10.21	2 Y l a	I b
996	2PBC J1815.1-1205	4U 1812-12	LXB	273.779	-12.090	0.87	0.46	212.55	54.4 ± 0.3	0.373 ± 0.002	...	...	3.06	1 Y l a	I b
997	**2PBC J1815.2-1053**	PBCX J181503.9-105132	X	273.813	-10.889	4.97	3.31	5.06	1.0 ± 0.6	0.2 ± 0.1	...	...	1.39	1 N l a	I
998	2PBC J1816.0-1402	GX 17+2	LXB	274.007	-14.035	0.66	0.12	880.06	101.4 ± 0.2	0.0172 ± 0.0006	...	...	16.59	2 Y l a	I b
999	2PBC J1816.0+4952	AM Her	AM*	274.031	49.863	2.19	1.00	19.57	2.0 ± 0.5	0.11 ± 0.04	...	...	3.05	2 Y h a	b
1000	**2PBC J1816.2+4236**	MCG+07-37-031	Sy2	274.054	42.604	4.17	3.38	6.17	0.9 ± 0.6	0.5 ± 0.1	0.0412	43.56	1.37	3 N h a	
1001	**2PBC J1817.3-2507**	IGR J18173-2509	CV*	274.326	-25.129	4.83	1.22	4.81	0.7 ± 0.8	< 0.1	...	...	1.59	2 N l a	I f
1002	**2PBC J1817.7-3300**	[KRL2007b] 312	LXB	274.449	-32.993	2.18	1.78	19.73	4.5 ± 0.5	0.32 ± 0.02	...	...	13.35	1 N h b	I f
1003	**2PBC J1818.7-1701**	SAX J1818.6-1703	HXB	274.689	-17.027	3.83	2.14	7.11	1.3 ± 0.7	0.16 ± 0.06	...	...	2.65	2 N l a	I
1004	**2PBC J1819.3-6344**	PKS J1819-6345	BZU	274.838	-63.747	5.05	1.81	4.93	0.9 ± 0.6	0.5 ± 0.2	0.0630	43.92	1.77	3 N h a	
1005	**2PBC J1820.5-1433**	AX J1820.5-1434	HXB	275.136	-14.554	3.77	1.39	7.33	1.9 ± 1.0	0.30 ± 0.06	...	...	2.16	3 N l a	I
1006	**2PBC J1821.2+5957**	...	...	275.318	59.966	4.79	...	4.89	0.8 ± 0.5	0.5 ± 0.2	...	...	1.41	1 N h	
1007	**2PBC J1821.4-1318**	CXOU J182119.7-131838	gam	275.354	-13.309	3.34	1.24	9.00	2.4 ± 1.2	0.34 ± 0.05	...	...	2.13	1 N l a	I
1008	2PBC J1821.5+6421	1ES 1821+643	Sy1	275.437	64.338	2.54	1.37	14.77	1.9 ± 0.5	0.31 ± 0.05	0.2970	45.77	1.60	1 Y h a	I b
1009	2PBC J1823.6-3021	H 1820-303	LXB	275.915	-30.357	0.71	0.30	543.92	65.6 ± 0.2	0.0231 ± 0.0009	...	...	18.94	2 Y h a	I b
1010	2PBC J1824.3-5622	IGR J18244-5622	Sy2	276.050	-56.364	2.05	0.43	22.47	4.1 ± 0.5	0.38 ± 0.03	0.0169	43.42	1.70	1 Y h a	I

Table 2. continued.

	PBC name	ID	Type[a]	RA (deg)	Dec (deg)	Error radius (arcmin)	Offset (arcmin)	SNR	Flux[b] (erg cm^{-2} s^{-1})	Hardness ratio (R_{30-150}/R_{14-150})	Redshift	log L_{14-150}[c] (erg s^{-1})	Var	Flag 1[d] A B C D	Flag 2[e] I R F
1011	**2PBC J1824.2+1846**	...	...	276.065	18.775	4.68	...	5.09	1.1 ± 0.6	0.4 ± 0.1	...	...	1.53	3 N h	
1012	**2PBC J1824.3-1423**	XTE J1824-141	X	276.084	-14.399	3.89	1.34	6.92	1.7 ± 0.9	0.10 ± 0.06	...	...	1.71	2 N l a	I
1013	2PBC J1825.3-0001	H 1822-000	LXB	276.341	-0.025	1.70	0.77	32.81	3.2 ± 0.6	< 0.02	...	...	2.04	2 Y h a	I b
1014	2PBC J1825.7-3706	3A 1822-371	LXB	276.454	-37.106	0.80	0.42	294.72	42.9 ± 0.3	0.064 ± 0.002	...	...	2.62	2 Y h a	I b
1015	**2PBC J1826.0-0708**	IGR J18257-0707	X	276.513	-7.149	4.07	1.95	6.42	1.5 ± 0.9	0.37 ± 0.09	0.0370	43.66	1.83	1 N l a	I
1016	**2PBC J1826.3-1450**	V* V479 Sct	HXB	276.579	-14.849	4.68	0.95	5.08	2.0 ± 1.2	0.51 ± 0.09	...	...	2.09	1 N l a	I b F
1017	**2PBC J1826.6+3251**	...	...	276.659	32.856	4.26	...	5.95	1.2 ± 0.8	0.4 ± 0.1	...	...	1.54	1 N h	
1018	2PBC J1829.4-2347	Ginga 1826-24	LXB	277.370	-23.791	0.68	0.12	754.48	155.5 ± 0.3	0.3199 ± 0.0007	...	...	5.77	1 Y h a	I b
1019	2PBC J1829.6+4845	3C 380	BZU	277.404	48.754	3.61	0.96	7.87	1.4 ± 0.9	0.5 ± 0.1	0.6919	46.39	1.64	3 Y h a	b F
1020	2PBC J1831.0+0928	2MASX J18305065+0928414	G	277.729	9.480	3.82	1.05	7.14	1.4 ± 0.9	0.5 ± 0.1	...	...	1.29	1 Y h a	
		PBCX J183042.1+093100	X				3.83				...	...			
1021	**2PBC J1832.8+3124**	...	...	278.220	31.408	4.94	...	5.11	0.6 ± 0.4	0.5 ± 0.2	...	...	1.43	1 N h	
1022	2PBC J1833.5-1033	SNR 021.5-00.9	Psr	278.382	-10.559	2.07	0.80	22.03	6.9 ± 0.4	0.35 ± 0.02	...	...	1.57	1 Y l a	I F
1023	2PBC J1833.7-2102	PKS 1830-211	BZQ	278.419	-21.065	1.91	0.29	25.74	7.5 ± 1.4	0.51 ± 0.02	2.5070	48.32	2.22	1 Y h a	I F
1024	2PBC J1835.0+3241	3C 382	Sy1	278.742	32.699	1.60	1.13	37.64	7.6 ± 0.3	0.41 ± 0.02	0.0581	44.78	1.96	1 Y h a	I b
1025	2PBC J1835.7-3259	XB 1832-330	LXB	278.930	-32.983	1.11	0.15	94.13	20.1 ± 0.3	0.373 ± 0.006	...	...	2.50	1 Y h a	I F
1026	2PBC J1836.9-5925	1H 1828-593	Sy2	279.228	-59.438	3.65	2.17	7.72	1.2 ± 0.7	0.23 ± 0.08	0.0194	43.01	1.63	2 Y h a	b
1027	2PBC J1838.0-0655	AX J1838.0-0655	SNR	279.490	-6.895	2.51	2.33	15.13	5.3 ± 0.9	0.44 ± 0.03	...	...	1.84	1 Y l a	I
1028	2PBC J1838.4-6525	H 1834-653	Sy2	279.595	-65.419	1.33	0.57	57.63	10.2 ± 0.4	0.35 ± 0.01	0.0132	43.60	1.71	3 Y h a	I
1029	**2PBC J1838.9-5714**	PBCX J183906.3-571504	X	279.740	-57.234	3.98	1.55	6.66	1.0 ± 0.6	0.22 ± 0.09	...	...	1.76	3 N h a	
1030	2PBC J1839.9+0502	Ser X-1	LXB	279.993	5.041	0.84	0.38	244.49	20.7 ± 0.2	0.016 ± 0.003	...	...	5.39	2 Y l a	I b
1031	2PBC J1841.0-0538	IGR J18410-0535	HXB	280.228	-5.594	3.65	1.44	7.72	2.2 ± 1.2	0.38 ± 0.06	...	...	2.17	1 Y l a	I
1032	2PBC J1841.3-0456	PSR B1841-04	Psr	280.347	-4.925	2.15	1.19	20.42	8.0 ± 2.6	0.59 ± 0.03	...	...	1.74	1 Y l a	I b
1033	2PBC J1842.0+7946	3C 390.3	Sy1	280.525	79.778	1.42	0.39	49.44	9.3 ± 0.3	0.41 ± 0.01	0.0561	44.84	2.03	1 Y h a	I b
1034	**2PBC J1842.3-1124**	SWIFT J1842.5-1124	X	280.582	-11.412	1.93	0.60	25.32	8.1 ± 0.4	0.43 ± 0.02	...	...	20.70	1 N l a	I
1035	2PBC J1844.8-6224	ESO140-43	Sy1	281.208	-62.389	2.10	1.55	21.25	4.0 ± 0.4	0.39 ± 0.03	0.0141	43.25	1.46	1 Y h a	I b
1036	2PBC J1844.9-0433	IGR J18450-0435	HXB	281.240	-4.572	2.46	1.10	15.74	3.4 ± 0.7	0.28 ± 0.03	...	...	2.04	1 Y l a	I
1037	2PBC J1845.5+7212	2MASX J18452628+7211008	Sy2	281.352	72.189	3.25	0.32	9.45	1.2 ± 0.7	0.33 ± 0.08	0.0461	43.77	2.14	3 Y h a	
1038	2PBC J1845.6+0051	Ginga 1843+009	HXB	281.406	0.869	1.61	0.26	37.02	8.0 ± 0.4	0.29 ± 0.01	...	...	14.47	3 Y l a	I
1039	**2PBC J1846.0+5607**	1RXS J184557.8+561003	X	281.516	56.127	4.97	2.58	5.05	0.9 ± 0.6	0.5 ± 0.2	...	...	1.53	1 N h b	b
1040	2PBC J1846.3-0258	PSR J1846-0258	Psr	281.621	-2.967	2.54	1.22	14.77	3.9 ± 0.7	0.43 ± 0.04	...	...	1.82	1 Y l a	I b
1041	2PBC J1847.4-7831	H 1846-786	Sy1	281.975	-78.511	3.08	2.91	10.40	1.4 ± 0.7	0.35 ± 0.07	0.0743	44.29	1.96	1 Y h a	b
1042	2PBC J1848.2-0311	IGR J18483-0311	HXB	282.060	-3.171	1.74	0.66	31.44	6.8 ± 0.4	0.26 ± 0.02	...	...	7.44	1 Y l a	I
1043	2PBC J1848.3-0045	IGR J18485-0047	gam	282.103	-0.767	4.07	1.11	6.41	2.0 ± 1.1	0.41 ± 0.07	...	...	1.67	3 Y l a	I
1044	**2PBC J1848.7+0039**	NOVA Aql 1918	No*	282.180	0.659	4.87	5.34	5.23	0.5 ± 1.0	< 0.2	...	...	1.82	2 N l a	b
1045	2PBC J1848.8-0002	2MASS J18490182-0001190	IR	282.246	-0.023	3.43	0.67	8.63	2.7 ± 1.5	0.43 ± 0.05	...	...	1.87	1 Y l a	I
1046	2PBC J1853.0-0841	3A 1850-087	LXB	283.263	-8.711	1.29	0.54	62.05	11.8 ± 0.4	0.34 ± 0.01	...	...	3.44	3 Y l a	I b
1047	**2PBC J1853.9-7850**	ESO 25-2	Sy1	283.491	-78.841	4.38	4.00	5.67	1.1 ± 0.7	0.6 ± 0.1	0.0287	43.31	2.34	1 N h a	b
1048	2PBC J1854.9-3109	V* V1223 Sgr	DQ*	283.746	-31.169	1.40	0.74	50.95	9.9 ± 0.3	0.186 ± 0.009	...	...	3.44	3 Y h a	I b
1049	2PBC J1855.5-0236	XTE J1855-026	HXB	283.873	-2.604	1.13	0.44	90.01	18.5 ± 0.3	0.262 ± 0.006	...	...	4.15	3 Y l a	I
1050	2PBC J1856.0+1537	2E 1853.7+1534	Sy1	283.997	15.632	2.77	0.31	12.65	3.0 ± 0.5	0.38 ± 0.04	0.0840	44.72	1.44	1 Y h a	I
1051	2PBC J1856.6+0518	XTE J1856+053	LXB	284.178	5.318	2.46	1.18	15.70	3.5 ± 0.5	0.37 ± 0.04	...	...	5.59	1 Y l a	
1052	**2PBC J1856.9-5442**	1RXS J185650.3-544224	X	284.242	-54.707	5.03	1.11	4.96	1.0 ± 0.6	0.3 ± 0.1	0.0563	43.87	1.55	1 N h b	b
1053	2PBC J1857.4-7830	2E 1849.2-7832	Sy1	284.247	-78.500	2.82	1.85	12.23	2.2 ± 0.8	0.39 ± 0.05	0.0420	43.95	2.21	1 Y h a	
1054	2PBC J1858.6+0324	XTE J1858+034	HXB	284.699	3.390	3.78	3.15	7.27	0.8 ± 0.5	0.2 ± 0.1	...	...	2.04	3 Y l a	I
1055	2PBC J1900.1-2454	HETE J1900.1-2455	LXB	285.043	-24.912	0.88	0.65	204.22	45.5 ± 0.3	0.338 ± 0.003	...	...	49.73	3 Y h a	I
1056	2PBC J1901.6+0127	XTE J1901+014	XB*	285.401	1.460	2.06	1.76	22.11	5.2 ± 0.4	0.37 ± 0.02	...	...	1.79	3 Y l a	I b
1057	**2PBC J1903.7+3349**	2MASX J19034916+3350407	G	285.950	33.831	3.79	0.83	7.26	1.3 ± 0.8	0.42 ± 0.10	0.0150	42.83	1.79	3 N h a	
1058	**2PBC J1905.3+4232**	2MASX J19052592+4227398	Sy1	286.339	42.539	3.99	4.73	6.65	1.4 ± 0.8	0.38 ± 0.08	0.0275	43.37	1.90	3 N h a	b
1059	2PBC J1907.2+0918	SGR 1900+14	Psr	286.804	9.326	4.50	0.39	5.43	2.1 ± 1.3	0.52 ± 0.09	...	...	1.67	1 Y l a	I
1060	2PBC J1907.2-2048	V1082SGR	CV*	286.822	-20.815	3.58	2.16	7.99	1.4 ± 0.8	0.17 ± 0.07	...	...	1.79	3 Y h a	b
1061	**2PBC J1907.9-3924**	1RXS J190749.9-392341	X	286.978	-39.406	4.77	1.17	4.92	0.9 ± 0.5	0.23 ± 0.10	0.0725	44.06	1.54	3 N h b	I b
1062	2PBC J1909.6+0950	H 1907+097	HXB	287.422	9.842	1.02	1.10	120.59	17.2 ± 0.3	0.065 ± 0.005	...	...	7.80	2 Y l a	I b
1063	**2PBC J1909.8+6732**	...	...	287.474	67.536	4.88	...	5.21	0.7 ± 0.5	0.4 ± 0.2	...	...	1.34	1 N h	
1064	2PBC J1910.7+0735	4U 1909+07	HXB	287.691	7.593	1.02	0.55	121.33	22.8 ± 0.3	0.241 ± 0.005	...	...	4.45	2 Y l a	I
1065	2PBC J1911.2+0035	Aql X-1	LXB	287.806	0.574	1.26	0.91	66.90	14.9 ± 0.4	0.337 ± 0.008	...	...	32.35	3 Y l a	I b
1066	**2PBC J1911.4+1412**	...	...	287.861	14.208	4.47	...	5.48	1.4 ± 0.8	0.4 ± 0.1	...	...	1.60	1 N l	
1067	2PBC J1911.8+0459	SS 433	HXB	287.962	4.989	1.19	0.50	76.87	12.4 ± 0.3	0.212 ± 0.008	...	...	8.00	2 Y l a	I b
1068	2PBC J1914.0+0951	IGR J19140+0951	HXB	288.531	9.867	1.23	1.24	71.53	14.4 ± 0.3	0.250 ± 0.007	...	...	6.80	3 Y l a	I
1069	**2PBC J1914.8+1026**	...	...	288.714	10.447	4.96	...	5.07	2.7 ± 0.6	0.26 ± 0.04	...	...	1.73	1 N l	
1070	2PBC J1915.1+1056	GRS 1915+105	LXB	288.798	10.937	0.61	0.50	2067.63	387.2 ± 0.3	0.1971 ± 0.0002	...	...	263.56	3 Y l a	I

Table 2. continued.

	PBC name	ID	Type[a]	RA (deg)	Dec (deg)	Error radius (arcmin)	Offset (arcmin)	SNR	Flux[b] (erg cm^{-2} s^{-1})	Hardness ratio (R_{30-150}/R_{14-150})	Redshift	log L_{14-150}[c] (erg s^{-1})	Var	Flag 1[d] A B C D	Flag 2[e] I R F
1071	2PBC J1918.7-0513	4U 1916-053	LXB	289.694	-5.227	1.14	0.64	88.03	16.1 ± 0.3	0.279 ± 0.007	...	...	2.97	1 Y h a	I b
1072	**2PBC J1919.2+4411**	...	...	289.822	44.197	4.64	...	5.15	0.8 ± 0.4	0.3 ± 0.1	...	...	1.77	2 N h	
1073	**2PBC J1919.4-2958**	1RXS J191928.5-295808	X	289.868	-29.974	4.70	0.29	5.04	0.9 ± 0.5	0.3 ± 0.1	0.1668	44.88	1.82	3 N h b	I b
1074	**2PBC J1919.5+4345**	...	...	289.877	43.760	4.97	...	5.05	0.7 ± 0.4	0.2 ± 0.1	...	...	1.85	3 N h	
1075	2PBC J1920.9+4358	ACO 2319	ClG	290.252	43.965	2.08	2.74	21.81	2.0 ± 0.5	< 0.03	0.0559	44.22	2.09	2 Y h a	
1076	2PBC J1921.3-5842	ESO 141-55	Sy1	290.336	-58.706	2.00	2.26	23.51	4.4 ± 0.5	0.37 ± 0.03	0.0366	44.13	1.51	1 Y h a	I b
1077	2PBC J1922.6-1716	SWIFT J1922.7-1716	gam	290.646	-17.272	2.20	0.86	19.50	4.7 ± 0.5	0.37 ± 0.03	...	...	4.66	1 Y h a	I
1078	2PBC J1924.4+5014	CH Cyg	Sy*	291.129	50.254	2.98	0.71	11.06	1.1 ± 0.6	0.07 ± 0.06	...	...	1.59	2 Y h a	b
1079	2PBC J1924.4-2913	OV -236	BZQ	291.158	-29.235	4.05	2.89	6.47	1.4 ± 0.8	0.36 ± 0.09	0.3520	45.80	2.08	1 Y h a	I b F
1080	**2PBC J1926.6+4131**	1RXS J192630.6+413314	X	291.662	41.528	4.44	2.19	5.54	0.9 ± 0.5	0.3 ± 0.1	...	...	1.28	3 N h a	
1081	**2PBC J1929.9+1818**	SWIFT J1929.8+1818	X	292.498	18.308	4.52	0.94	5.37	0.9 ± 0.6	0.21 ± 0.10	...	...	2.99	2 N l a	I f
1082	2PBC J1933.8+3254	1RXS J193347.6+325422	Sy1	293.428	32.933	3.51	1.83	8.26	1.7 ± 0.9	0.35 ± 0.07	0.0580	44.13	1.85	2 Y h a	b
1083	2PBC J1937.4-0613	IGR J19378-0617	Sy1	294.370	-6.239	3.41	1.63	8.70	2.0 ± 1.0	0.36 ± 0.06	0.0105	42.69	1.65	1 Y h a	I b
1084	**2PBC J1938.2-5107**	1H 1927-516	Sy1	294.573	-51.121	3.77	3.23	7.32	1.2 ± 0.8	0.5 ± 0.1	0.0400	43.64	1.59	3 N h b	b
1085	**2PBC J1940.2-3015**	2MASX J19401507-3015522	AGN	295.061	-30.257	4.26	0.45	5.94	1.5 ± 0.8	0.30 ± 0.09	0.0520	43.98	2.29	2 N h a	I b
1086	2PBC J1940.2-1024	RX J1940.2-1025	AM*	295.070	-10.414	2.02	1.41	23.15	4.3 ± 0.4	0.20 ± 0.02	...	...	1.87	2 Y h a	I b
1087	2PBC J1942.6-1019	NGC 6814	Sy1	295.662	-10.314	1.86	0.70	27.41	6.9 ± 0.4	0.40 ± 0.02	0.0052	42.62	2.01	1 Y h a	I b
1088	2PBC J1943.9+2118	IGR J19443+2117	gam	295.971	21.301	2.75	0.81	12.81	2.2 ± 0.7	0.39 ± 0.05	...	...	2.39	3 Y l a	I b
1089	2PBC J1947.2+4448	CXOU J194719.3+444942	AGN	296.811	44.825	2.82	0.85	12.22	1.7 ± 0.6	0.32 ± 0.06	0.0530	44.05	1.65	3 Y h a	I
1090	2PBC J1949.5+3011	KS 1947+300	HXB	297.385	30.199	1.88	0.90	26.80	4.6 ± 0.3	0.24 ± 0.02	...	...	8.82	3 Y l a	I
1091	2PBC J1952.2+0230	3C 403	Sy2	298.035	2.481	3.39	2.25	8.79	2.8 ± 1.6	0.47 ± 0.06	0.0590	44.36	2.01	1 Y h a	I
1092	2PBC J1955.6+3205	3A 1954+319	LXB	298.918	32.085	1.04	0.79	113.80	22.3 ± 0.3	0.196 ± 0.004	...	...	34.48	2 Y l a	I b
1093	2PBC J1958.2+3232	V* V2306 Cyg	CV*	299.538	32.514	3.67	2.17	7.68	1.2 ± 0.6	0.09 ± 0.07	...	...	1.90	2 Y l a	
1094	2PBC J1958.3+3512	Cyg X-1	HXB	299.589	35.204	0.58	0.12	4199.58	1912.7 ± 0.5	0.4458 ± 0.0001	...	...	20.05	3 Y l a	I b
1095	2PBC J1959.2+1143	4U 1957+115	LXB	299.828	11.702	2.96	1.33	11.17	1.8 ± 0.6	0.21 ± 0.05	...	...	2.46	1 Y h a	b
1096	2PBC J1959.4+4044	Cygnus A	Sy2	299.869	40.731	1.39	0.17	52.08	10.5 ± 0.4	0.40 ± 0.01	0.0561	44.89	2.08	1 Y h a	I b
1097	2PBC J1959.8+6509	1ES 1959+650	BZB	299.946	65.151	1.98	1.34	24.10	3.3 ± 0.4	0.28 ± 0.03	0.0480	44.26	2.11	3 Y h a	I b F
1098	2PBC J2000.3+3211	IGR J20006+3210	HXB	300.079	32.178	2.23	0.92	18.99	4.2 ± 0.4	0.26 ± 0.02	...	...	2.50	2 Y l a	I
1099	2PBC J2000.9-1812	2MASX J20005575-1810274	Sy1	300.229	-18.194	3.61	1.20	7.87	1.6 ± 0.9	0.34 ± 0.08	0.0374	43.72	1.65	3 Y h a	
1100	**2PBC J2003.7+7015**	...	...	300.936	70.259	4.88	...	5.21	0.5 ± 0.3	0.3 ± 0.2	...	...	1.55	3 N h	
1101	**2PBC J2004.6-1113**	...	...	301.168	-11.221	4.94	...	5.11	0.9 ± 0.5	0.3 ± 0.1	...	...	1.62	2 N h	
1102	2PBC J2006.9-3433	ESO 399-20	Sy1	301.707	-34.556	3.87	1.61	6.98	1.8 ± 1.0	0.43 ± 0.08	0.0249	43.40	1.60	1 Y h a	I b
1103	2PBC J2008.9-6105	NGC 6860	Sy1	302.195	-61.106	2.11	0.44	21.10	4.5 ± 0.5	0.39 ± 0.03	0.0148	43.34	1.58	3 Y h a	b
1104	**2PBC J2010.2-7137**	...	...	302.555	-71.623	4.53	...	5.36	0.7 ± 0.4	0.2 ± 0.1	...	...	1.59	2 N h	
1105	**2PBC J2010.2+4759**	...	...	302.569	47.996	4.68	...	5.08	1.0 ± 0.7	0.5 ± 0.1	...	...	2.02	3 N h	
1106	**2PBC J2010.3-2522**	1RXS J201020.0-252356	X	302.594	-25.370	4.87	1.85	5.23	1.3 ± 0.8	0.5 ± 0.1	...	...	2.54	3 N h b	b
1107	**2PBC J2010.8-2910**	...	...	302.712	-29.177	4.99	...	5.03	0.8 ± 0.6	0.5 ± 0.2	...	...	2.68	1 N h	
1108	2PBC J2011.8-5650	ABELL 3667	ClG	303.036	-56.836	3.88	3.43	6.97	0.6 ± 0.3	< 0.10	0.0552	43.70	1.72	2 Y h a	b
1109	**2PBC J2013.0+5306**	...	...	303.263	53.102	4.60	...	5.23	0.9 ± 0.6	0.5 ± 0.2	...	...	1.21	3 N h	
1110	**2PBC J2015.3+2303**	...	...	303.841	23.061	4.93	...	5.12	0.5 ± 0.3	< 0.1	...	...	1.76	2 N h	
1111	**2PBC J2015.9+3712**	RX J2015.6+3711	CV*	303.977	37.211	5.07	3.74	4.89	0.9 ± 0.5	0.4 ± 0.1	...	...	1.61	3 N l a	
1112	2PBC J2018.1-5539	2MASX J20180125-5539312	Sy2	304.529	-55.657	2.71	0.81	13.16	2.9 ± 1.4	0.43 ± 0.05	0.0602	44.40	1.95	1 Y h a	f
1113	2PBC J2018.6+4041	IGR J20187+4041	Sy2	304.666	40.695	2.65	0.72	13.69	2.8 ± 0.6	0.42 ± 0.04	0.0144	43.10	1.59	1 Y l a	I
1114	**2PBC J2021.7+4359**	IGR J20216+4359	gam	305.430	43.992	4.24	1.54	5.99	1.1 ± 0.7	0.4 ± 0.1	0.0170	42.87	2.11	3 N l a	I
1115	**2PBC J2027.0-0216**	6dFGS gJ202655.8-021639	Sy2	306.758	-2.273	5.07	1.53	4.90	1.0 ± 0.5	0.3 ± 0.1	0.0290	43.29	1.41	3 N h b	
1116	2PBC J2028.6+2544	IGR J20286+2544	Sy2	307.142	25.727	2.00	0.47	23.46	6.1 ± 0.5	0.47 ± 0.02	0.0142	43.44	1.82	3 Y h a	I f
1117	**2PBC J2029.4-6146**	...	...	307.373	-61.781	3.94	...	6.79	1.1 ± 0.7	0.4 ± 0.1	...	...	1.54	3 N h	
1118	**2PBC J2030.7-7530**	...	...	307.686	-75.513	4.83	...	4.81	0.9 ± 0.5	0.3 ± 0.1	...	...	1.91	3 N h	
1119	**2PBC J2030.8+3834**	...	...	307.705	38.575	4.95	...	5.09	0.9 ± 0.5	0.2 ± 0.1	...	...	1.58	2 N l	
1120	2PBC J2032.2+3738	EXO 2030+375	HXB	308.067	37.634	0.69	0.28	642.68	104.4 ± 0.3	0.2265 ± 0.0009	...	...	142.27	2 Y l a	I b
1121	2PBC J2032.4+4057	Cyg X-3	HXB	308.106	40.962	0.63	0.27	1539.12	200.9 ± 0.3	0.1816 ± 0.0004	...	...	217.94	2 Y l a	I b F
1122	2PBC J2033.5+2144	4C +21.55	QSO	308.380	21.766	2.73	0.42	12.99	2.9 ± 1.2	0.45 ± 0.05	0.1735	45.37	1.54	3 Y h a	
1123	**2PBC J2034.3-3038**	2MASX J20343135-3037289	Sy1	308.598	-30.638	4.83	1.78	4.82	1.0 ± 0.6	0.3 ± 0.1	0.0190	42.89	1.53	1 N h b	b
1124	**2PBC J2035.2+2604**	1RXS J203505.9+260317	X	308.823	26.081	4.29	3.04	5.88	1.3 ± 0.8	0.4 ± 0.1	...	...	1.68	1 N h b	b
1125	2PBC J2037.1+4149	SWIFT J2037.2+4151	X	309.290	41.837	2.60	0.72	14.22	1.0 ± 0.5	< 0.07	...	...	1.96	2 Y l a	I
1126	2PBC J2042.6+7508	4C 74.26	Sy1	310.659	75.146	1.98	0.70	24.03	4.3 ± 0.3	0.34 ± 0.02	0.1039	45.08	1.84	3 Y h a	I b
1127	2PBC J2044.0+2834	RX J2044.0+2833	Sy1	311.014	28.585	3.88	1.96	6.96	1.4 ± 0.8	0.36 ± 0.08	0.0500	43.92	1.74	1 Y h a	b
1128	2PBC J2044.1-1043	Mrk 509	Sy1	311.034	-10.733	1.65	0.66	35.29	8.5 ± 0.4	0.40 ± 0.02	0.0343	44.36	2.28	1 Y h a	I b
1129	**2PBC J2045.9+8321**	...	...	311.480	83.362	4.65	...	5.14	0.5 ± 0.3	0.4 ± 0.1	...	...	1.30	1 N h	
1130	**2PBC J2048.3+3812**	...	...	312.085	38.213	4.82	...	4.84	0.8 ± 0.5	0.4 ± 0.1	...	...	1.54	1 N l	
1131	2PBC J2052.0-5704	IC 5063	Sy2	313.002	-57.074	1.81	0.33	28.97	6.4 ± 0.4	0.43 ± 0.02	0.0112	43.26	2.31	1 Y h a	

Table 2. continued.

	PBC name	ID	Type[a]	RA (deg)	Dec (deg)	Error radius (arcmin)	Offset (arcmin)	SNR	Flux[b] (erg cm^{-2} s^{-1})	Hardness ratio (R_{30-150}/R_{14-150})	Redshift	log L_{14-150}[c] (erg s^{-1})	Var	Flag 1[d] A B C D	Flag 2[e] I R F
1132	**2PBC J2054.8-4706**	...	...	313.700	-47.102	4.95	...	5.08	0.7 ± 0.4	0.3 ± 0.1	...	...	1.48	2 N h	
1133	**2PBC J2055.7-4711**	PKS 2052-47	BZQ	313.927	-47.189	4.44	3.31	5.54	1.0 ± 0.7	0.5 ± 0.2	1.4910	47.05	1.54	3 N l a	F
1134	**2PBC J2055.7+4925**	...	...	313.949	49.417	5.05	...	4.92	0.4 ± 0.2	< 0.2	...	...	1.52	2 N l	f
1135	**2PBC J2056.5+4938**	RX J2056.6+4940	X	314.136	49.642	4.12	2.28	6.29	0.9 ± 0.5	0.22 ± 0.08	...	...	1.67	2 N l a	I b ?
1136	2PBC J2103.6+4544	SAX J2103.5+4545	HXB	315.911	45.758	1.91	0.64	25.72	3.6 ± 0.3	0.22 ± 0.02	...	...	12.15	2 Y l a	I
1137	**2PBC J2105.9-0417**	...	...	316.489	-4.293	4.90	...	5.18	0.6 ± 0.4	< 0.2	...	...	1.84	2 N h	
1138	2PBC J2109.0-0940	RBS 1727	Sy1	317.279	-9.683	3.35	1.01	8.97	1.3 ± 0.8	0.26 ± 0.09	0.0270	43.34	1.21	3 Y h a	b
1139	**2PBC J2112.5-4242**	...	...	318.135	-42.706	4.88	...	5.21	0.6 ± 0.4	0.4 ± 0.2	...	...	1.88	1 N h	
1140	**2PBC J2113.5+5423**	...	...	318.379	54.384	5.02	...	4.97	0.7 ± 0.4	0.3 ± 0.1	...	...	1.47	2 N l	
1141	2PBC J2113.7+8206	S5 2116+81	Sy1	318.391	82.093	2.35	1.21	17.11	2.6 ± 0.6	0.40 ± 0.04	0.0860	44.68	1.61	3 Y h a	I b
1142	**2PBC J2116.2+2519**	...	...	319.071	25.324	4.92	...	5.13	0.4 ± 0.3	0.2 ± 0.2	...	...	1.98	2 N h	
1143	2PBC J2117.6+5137	IGR J21178+5139	AG?	319.427	51.636	2.82	1.18	12.24	2.2 ± 1.3	0.46 ± 0.06	...	...	1.83	1 Y l a	I
1144	2PBC J2119.7+3329	1RXS J211928.4+333259	X	319.851	33.536	4.81	1.20	4.85	0.7 ± 0.4	0.4 ± 0.2	...	...	1.54	1 Y h a	I b
1145	2PBC J2123.6+4217	V2069 Cyg	CV*	320.933	42.277	3.25	1.43	9.49	1.3 ± 0.7	0.16 ± 0.06	...	...	1.71	2 Y h a	I b
1146	2PBC J2123.8+2502	3C 433	Sy2	320.960	25.074	3.93	1.33	6.82	1.1 ± 0.8	0.5 ± 0.1	0.1017	44.45	1.39	3 Y h a	
1147	**2PBC J2123.9+3407**	2MASX J21240027+3409114	G	320.979	34.117	4.90	2.41	5.18	1.0 ± 0.6	0.4 ± 0.1	...	...	1.38	3 N h a	b
1148	**2PBC J2124.5+0503**	...	...	321.128	5.062	4.75	...	4.96	0.6 ± 0.4	< 0.1	...	...	1.60	2 N h	
1149	2PBC J2124.6+5058	IGR J21247+5058	Sy1	321.161	50.970	1.15	0.38	85.77	16.1 ± 0.3	0.404 ± 0.007	0.0200	44.16	2.90	1 Y l a	I
1150	2PBC J2127.7+5657	IGR J21277+5656	Sy1	321.901	56.957	2.02	1.40	22.98	3.1 ± 0.4	0.23 ± 0.03	0.0140	43.14	1.47	3 Y l a	I b
1151	2PBC J2129.2-1537	PKS 2126-158	BZQ	322.316	-15.617	3.35	1.87	8.99	2.4 ± 1.4	0.49 ± 0.07	3.2680	48.14	1.89	1 Y h a	b
1152	2PBC J2129.9+1210	4U 2129+12	LXB	322.498	12.173	1.48	0.41	45.04	7.7 ± 0.3	0.28 ± 0.01	...	...	2.27	1 Y h a	I b
1153	2PBC J2131.8-3343	RBS 1756	Sy1	323.004	-33.710	2.49	0.38	15.32	3.8 ± 0.6	0.40 ± 0.04	0.0297	43.89	1.93	1 Y h a	b
1154	2PBC J2133.9+5106	IGR J21335+5105	CV*	323.436	51.109	1.71	0.88	32.45	4.8 ± 0.3	0.21 ± 0.02	...	...	1.97	2 Y l a	I b
1155	2PBC J2134.8-2727	1RXS J213445.2-272551	Sy1	323.693	-27.452	3.26	1.32	9.40	1.9 ± 1.2	0.49 ± 0.09	0.0670	44.30	1.59	3 Y h a	b
1156	2PBC J2136.0+4728	RX J2135.9+4728	Sy1	324.001	47.478	2.99	1.00	10.99	1.9 ± 0.9	0.37 ± 0.05	0.0252	43.44	1.64	3 Y l a	I b
1157	**2PBC J2136.3+2003**	...	...	324.077	20.051	4.94	...	5.11	0.8 ± 0.5	0.4 ± 0.2	...	...	1.90	3 N h	
1158	2PBC J2136.4-6225	RBS 1763	Sy1	324.108	-62.420	2.61	1.22	14.05	2.7 ± 0.4	0.35 ± 0.04	0.0589	44.35	2.01	1 Y h a	b
1159	**2PBC J2137.7-1433**	2MASX J21374518-1432554	QSO	324.437	-14.557	4.98	0.48	5.04	1.2 ± 0.7	0.5 ± 0.1	0.2001	45.11	1.99	1 N h a	b
1160	2PBC J2138.4+3205	2MASX J21383340+3205060	Sy1	324.637	32.101	3.81	0.99	7.19	1.5 ± 0.9	0.44 ± 0.09	0.0250	43.33	1.45	1 Y h a	b
1161	**2PBC J2139.3+5659**	V* V490 Cep	HXB	324.828	56.996	4.65	1.72	5.13	0.3 ± 0.2	< 0.2	...	...	3.63	2 N l a	
1162	2PBC J2139.6+5955	1RXS J213944.3+595016	X	324.897	59.865	4.01	2.00	6.59	0.8 ± 0.5	0.27 ± 0.10	...	...	1.55	2 Y h a	I b
1163	**2PBC J2141.1-2647**	2MASS J21411024-2645501	Sy1	325.277	-26.787	4.58	1.61	5.26	0.7 ± 0.4	0.2 ± 0.2	0.1290	44.51	1.68	3 N h b	
1164	2PBC J2142.7+4334	SS Cyg	DN*	325.683	43.576	1.61	0.64	37.17	4.8 ± 0.3	0.18 ± 0.02	...	...	2.66	2 Y h a	I b
1165	**2PBC J2143.4-5637**	1RXS J214358.7-563733	X	325.856	-56.630	4.57	4.56	5.28	0.4 ± 0.3	< 0.2	0.0819	43.88	2.10	2 N l b	b
1166	2PBC J2144.6+3819	Cyg X-2	LXB	326.173	38.321	0.70	0.06	615.91	44.2 ± 0.2	0.020 ± 0.001	...	...	13.86	2 Y h a	I
1167	2PBC J2146.4-3051	6dFGS gJ214636.1-305141	Sy1	326.643	-30.874	4.17	0.83	6.17	0.8 ± 0.5	0.4 ± 0.2	0.0753	44.01	2.12	3 Y h a	b
1168	**2PBC J2146.9+2514**	...	...	326.750	25.242	5.02	...	4.98	0.5 ± 0.3	0.3 ± 0.1	...	...	1.49	2 N h	
1169	2PBC J2148.0+0657	4C +06.69	BZQ	327.032	6.949	2.97	0.89	11.13	2.1 ± 1.2	0.47 ± 0.07	0.9900	46.98	1.74	1 Y h a	b F
1170	2PBC J2148.2-3455	NGC 7130	EmG	327.056	-34.985	3.61	2.32	7.90	1.5 ± 1.0	0.6 ± 0.1	0.0160	42.93	1.90	1 Y h a	
1171	**2PBC J2150.1-1856**	1RXS J214958.2-185926	Sy1	327.542	-18.943	4.54	3.74	5.35	0.9 ± 0.5	0.3 ± 0.1	0.1580	44.79	1.90	1 N h b	b
1172	**2PBC J2150.7+1405**	CGCG 427-028	G	327.697	14.087	4.41	1.39	5.61	1.1 ± 0.6	0.30 ± 0.10	0.0303	43.36	1.64	2 N h a	
1173	2PBC J2152.0-3027	PKS 2149-306	BZQ	327.996	-30.459	1.86	0.82	27.13	7.1 ± 1.7	0.53 ± 0.03	2.3450	48.20	2.07	1 Y h a	I b
1174	**2PBC J2155.1+6205**	...	...	328.779	62.095	4.69	...	5.06	0.6 ± 0.3	0.3 ± 0.2	...	...	1.48	1 N h	
1175	**2PBC J2157.3-6945**	2MASX J21570595-6941236	Sy1	329.348	-69.753	4.78	4.07	4.91	0.8 ± 0.5	0.4 ± 0.1	0.0280	43.17	1.27	3 N h a	b
1176	**2PBC J2157.4-0611**	1RXS J215727.0-061022	X	329.359	-6.188	4.75	0.95	4.96	0.7 ± 0.4	0.4 ± 0.2	...	...	1.66	3 N h b	b
1177	2PBC J2200.7+1033	Mrk 520	Sy1	330.179	10.563	2.41	0.72	16.30	2.7 ± 0.5	0.38 ± 0.04	0.0272	43.66	1.72	1 Y h a	I
1178	2PBC J2202.0-3152	NGC 7172	Sy2	330.508	-31.878	1.31	0.37	60.50	13.6 ± 0.4	0.44 ± 0.01	0.0086	43.35	2.64	3 Y h a	I f
1179	2PBC J2202.7+4217	BL Lac	BZB	330.728	42.274	2.74	2.13	12.84	2.3 ± 0.9	0.41 ± 0.05	0.0688	44.41	1.65	3 Y h a	I b F
1180	2PBC J2203.3+3148	4C 31.63	BZQ	330.798	31.794	3.53	2.15	8.21	0.8 ± 0.5	0.4 ± 0.1	0.2980	45.37	1.97	3 Y h a	b
1181	2PBC J2204.4+0336	2MASX J22041914+0333511	Sy2	331.077	3.579	2.88	0.89	11.75	1.5 ± 0.8	0.32 ± 0.08	0.0611	44.12	1.67	3 Y h a	
1182	**2PBC J2207.0+1014**	NGC 7212	Sy2	331.762	10.248	5.07	0.90	4.89	0.9 ± 0.5	0.4 ± 0.1	0.0263	43.13	1.45	3 N h a	
1183	2PBC J2207.9+5430	3A 2206+543	HXB	331.993	54.513	1.03	0.42	115.51	17.5 ± 0.3	0.284 ± 0.005	...	...	12.81	3 Y l a	I b
1184	**2PBC J2209.1-2746**	NGC 7214	Sy1	332.275	-27.782	4.41	1.72	5.62	1.2 ± 0.8	0.5 ± 0.2	0.0234	43.16	1.85	1 N h a	b
1185	2PBC J2209.2-4710	NGC 7213	BZU	332.304	-47.150	2.10	1.16	21.41	4.0 ± 0.9	0.47 ± 0.04	0.0059	42.50	1.75	3 Y h a	b
1186	**2PBC J2211.9+1843**	BZQJ2211+1841	BZQ	332.934	18.744	3.37	3.63	8.86	1.2 ± 0.7	0.5 ± 0.1	0.0699	44.16	1.55	1 N h b	b
1187	2PBC J2213.9+1242	V* RU Peg	DN*	333.493	12.723	2.83	1.60	12.14	1.4 ± 0.7	0.17 ± 0.06	...	...	1.53	2 Y h a	b
1188	**2PBC J2214.1-2557**	...	...	333.550	-25.963	4.45	...	5.53	1.2 ± 0.7	0.4 ± 0.1	...	...	1.82	3 N h	
1189	2PBC J2214.7-3849	RBS 1835	Sy1	333.671	-38.819	4.39	0.79	5.65	1.0 ± 0.6	0.4 ± 0.1	0.0392	43.57	1.95	1 Y h a	b
1190	2PBC J2217.1+1410	Mrk 304	Sy1	334.276	14.227	4.05	1.65	6.47	1.0 ± 0.5	0.2 ± 0.1	0.0662	44.02	1.54	2 Y h a	
1191	2PBC J2217.9-0820	FO Aqr	DQ*	334.486	-8.341	1.54	0.70	40.90	4.7 ± 0.3	0.15 ± 0.02	...	...	1.74	2 Y h a	I b
1192	**2PBC J2218.4+1925**	RX J2218.5+1925	X	334.621	19.422	4.26	0.88	5.95	0.7 ± 0.4	< 0.1	...	...	1.57	2 N h a	b

Table 2. continued.

	PBC name	ID	Type[a]	RA (deg)	Dec (deg)	Error radius (arcmin)	Offset (arcmin)	SNR	Flux[b] (erg cm^{-2} s^{-1})	Hardness ratio (R_{30-150}/R_{14-150})	Redshift	log L_{14-150}[c] (erg s^{-1})	Var	Flag 1[d] A B C D	Flag 2[e] I R F
1193	**2PBC J2219.8+2613**	BZQJ2219+2613	BZQ	334.948	26.221	3.17	0.49	9.89	1.7 ± 1.0	0.45 ± 0.07	0.0850	44.48	1.69	1 N h b	b
1194	**2PBC J2223.6+1152**	MCG+02-57-002	Sy1	335.912	11.873	4.80	2.71	4.86	1.0 ± 0.6	0.4 ± 0.1	0.0290	43.30	1.33	1 N h a	b
1195	2PBC J2223.8-0206	3C 445	Sy1	335.966	-2.100	2.17	0.59	20.01	4.1 ± 0.5	0.37 ± 0.03	0.0563	44.49	1.56	3 Y h a	
1196	2PBC J2227.0+3623	MCG+06-49-019	Sy1	336.753	36.366	3.58	1.06	7.99	1.6 ± 1.0	0.50 ± 0.09	0.0211	43.20	1.72	1 Y h a	b
1197	**2PBC J2227.2+0736**	...	...	336.815	7.608	4.88	...	5.21	0.6 ± 0.3	0.2 ± 0.2	...	...	1.59	2 N h	
1198	**2PBC J2227.2-7022**	FRL 357	H2G	336.818	-70.379	4.89	1.36	5.19	0.7 ± 0.4	0.4 ± 0.1	0.0284	43.12	1.35	3 N h b	
1199	2PBC J2229.4+6647	IGR J22292+6647	AGN	337.257	66.791	3.84	0.92	7.08	1.4 ± 0.8	0.49 ± 0.09	0.1130	44.65	1.74	1 Y h a	I
1200	2PBC J2229.6-0831	PKS 2227-08	BZQ	337.408	-8.520	3.63	1.80	7.81	1.5 ± 1.0	0.6 ± 0.1	1.5615	47.14	1.64	1 Y h a	f F
1201	2PBC J2232.4+1144	4C +11.69	BZQ	338.136	11.733	2.95	0.96	11.23	2.4 ± 1.5	0.52 ± 0.06	1.0370	47.00	1.42	1 Y h a	b F
1202	**2PBC J2234.5-3709**	2MASX J22344092-3706434	Sy1	338.628	-37.163	4.81	3.67	4.85	0.7 ± 0.4	0.4 ± 0.2	0.0430	43.48	1.45	1 N h a	b
1203	**2PBC J2234.8-2541**	ESO 533-50	Sy2	338.711	-25.729	3.46	3.14	8.50	1.6 ± 1.0	0.41 ± 0.09	0.0263	43.40	1.46	1 N h b	
1204	2PBC J2235.6-2601	NGC 7314	Sy1	338.937	-26.016	2.10	2.06	21.33	4.3 ± 0.5	0.38 ± 0.03	0.0047	42.33	1.55	3 Y h a	I b
1205	2PBC J2236.0+3358	NGC7319 (Stephan)	Sy2	339.008	33.992	2.45	1.08	15.90	3.3 ± 1.0	0.45 ± 0.04	0.0221	43.55	1.85	1 Y h a	
1206	2PBC J2236.7-1232	Mrk 915	Sy1	339.210	-12.552	2.69	1.05	13.27	2.5 ± 1.5	0.49 ± 0.06	0.0240	43.51	1.23	1 Y h a	I b
1207	**2PBC J2238.9+4050**	...	...	339.728	40.835	4.50	...	5.43	0.7 ± 0.4	0.4 ± 0.2	...	...	1.36	3 N h	
1208	2PBC J2240.2+0802	RHS 59	Sy1	340.074	8.035	3.72	1.10	7.49	1.5 ± 0.9	0.35 ± 0.08	0.0250	43.34	1.58	3 Y h a	b
1209	2PBC J2245.8+3939	3C 452	Sy2	341.473	39.683	2.35	0.89	17.13	3.6 ± 1.8	0.50 ± 0.04	0.0810	44.74	1.84	3 Y h a	I
1210	**2PBC J2248.8+1725**	...	...	342.211	17.427	4.51	...	5.40	0.8 ± 0.5	0.4 ± 0.1	...	...	1.29	3 N h	
1211	**2PBC J2250.7-0853**	2MASS J22505170-0854568	AGN	342.679	-8.896	4.33	2.45	5.78	1.1 ± 0.7	0.4 ± 0.1	0.0650	44.05	1.65	1 N h b	
1212	2PBC J2251.8+2215	87GB 224928.1+220114	BZQ	342.928	22.278	3.22	2.68	9.65	1.6 ± 1.0	0.53 ± 0.10	3.6680	48.04	2.27	3 Y h a	I
1213	2PBC J2253.9+1609	3C 454.3	BZQ	343.484	16.153	1.45	0.48	47.08	10.5 ± 0.9	0.52 ± 0.01	0.8590	47.44	4.55	1 Y h a	I b F
1214	2PBC J2254.0-1734	RBS 1913	Sy1	343.517	-17.578	1.46	0.48	46.60	9.0 ± 0.4	0.39 ± 0.01	0.0639	44.94	2.90	1 Y h a	I b
1215	2PBC J2254.3+1146	MCG+02-58-032	Sy2	343.593	11.775	3.39	0.78	8.78	1.8 ± 1.0	0.39 ± 0.07	0.0285	43.51	1.53	1 Y h a	
1216	2PBC J2255.3-0310	AO Psc	DQ*	343.834	-3.177	1.97	0.54	24.29	2.7 ± 0.5	0.12 ± 0.03	...	...	1.50	2 Y h a	I b
1217	2PBC J2258.9+4055	MCG +07 -47 -002	Sy1	344.708	40.926	3.14	1.09	10.08	2.1 ± 1.3	0.51 ± 0.07	0.0171	43.14	1.58	3 Y h a	
1218	2PBC J2259.6+2454	RBS 1922	Sy1	344.916	24.926	2.60	1.65	14.18	2.2 ± 0.6	0.34 ± 0.05	0.0338	43.76	1.68	3 Y h a	b
1219	**2PBC J2301.5+3945**	...	...	345.376	39.763	4.96	...	5.07	0.3 ± 0.2	< 0.2	...	...	1.90	2 N h	
1220	**2PBC J2301.6-5912**	6dFGS gJ230136.3-591321	Sy1	345.402	-59.216	4.44	0.38	5.55	0.8 ± 0.5	0.3 ± 0.1	0.1500	44.70	1.78	2 N h a	b
1221	2PBC J2302.1+1558	NGC 7465	LIN	345.522	15.959	3.26	1.04	9.42	1.6 ± 1.0	0.55 ± 0.10	0.0065	42.18	1.40	3 Y h a	I
1222	**2PBC J2302.9-1841**	PKS 2300-18	BZU	345.746	-18.686	4.89	0.84	5.19	0.8 ± 0.5	0.3 ± 0.1	0.1288	44.55	1.90	3 N h a	b
1223	2PBC J2303.3+0852	NGC 7469	Sy1	345.815	8.861	1.79	0.74	29.70	6.1 ± 0.3	0.39 ± 0.02	0.0158	43.53	1.78	3 Y h a	I b
1224	2PBC J2304.7-0841	Mrk 926	Sy1	346.188	-8.688	1.38	0.42	52.64	10.0 ± 0.3	0.40 ± 0.01	0.0471	44.71	2.24	1 Y h a	I b
1225	2PBC J2304.8+1217	NGC 7479	Sy2	346.191	12.307	3.34	2.81	9.03	1.9 ± 1.1	0.46 ± 0.08	0.0079	42.41	1.74	3 Y h a	
1226	**2PBC J2305.3+0010**	MCG+00-58-028	Sy2	346.329	0.183	5.07	0.38	4.89	0.8 ± 0.5	0.4 ± 0.2	0.0250	43.08	1.19	3 N h b	
1227	2PBC J2307.2+0433	RBS 1944	Sy1	346.794	4.573	3.65	2.39	7.72	1.4 ± 0.8	0.42 ± 0.09	0.0420	43.77	1.54	1 Y h a	b
1228	**2PBC J2307.8+2244**	...	...	346.951	22.737	4.49	...	5.45	1.3 ± 0.8	0.4 ± 0.1	...	...	1.63	2 N h	
1229	**2PBC J2307.9+4015**	2MASX J23075724+4016393	G	346.992	40.266	4.04	0.72	6.51	0.9 ± 0.5	0.4 ± 0.1	...	...	1.29	1 N h a	b
1230	2PBC J2318.3-4221	NGC 7582	Sy2	349.600	-42.351	1.66	1.15	34.66	6.7 ± 0.4	0.44 ± 0.02	0.0052	42.61	1.56	1 Y h a	I
1231	2PBC J2318.9+0014	Mrk 530	Sy1	349.728	0.244	2.04	0.50	22.70	3.8 ± 0.4	0.35 ± 0.03	0.0292	43.88	1.55	3 Y h a	I b
1232	2PBC J2319.6+2616	RX J2319.5+261	CV*	349.911	26.282	3.17	2.38	9.90	0.9 ± 0.5	0.3 ± 0.1	...	...	1.38	3 Y h a	b
1233	**2PBC J2322.2-0645**	2MASX J23222444-0645375	G	350.566	-6.758	4.56	2.14	5.31	1.0 ± 0.7	0.5 ± 0.2	0.0329	43.39	2.33	1 N h a	
1234	**2PBC J2322.6+2903**	...	...	350.668	29.064	4.86	...	5.25	0.9 ± 0.6	0.6 ± 0.2	...	...	1.75	1 N h	
1235	2PBC J2323.3+5849	Cas A	SNR	350.841	58.820	1.42	0.94	49.51	6.2 ± 0.2	0.21 ± 0.01	...	...	1.33	2 Y l a	I F
1236	2PBC J2325.4-3827	RBS 2004	Sy1	351.367	-38.482	3.54	2.21	8.16	1.5 ± 0.9	0.44 ± 0.09	0.0358	43.63	1.78	1 Y h a	b
1237	2PBC J2325.8+2152	RHS 61	Sy1	351.463	21.895	3.22	1.00	9.61	1.4 ± 0.8	0.34 ± 0.07	0.1200	44.74	1.74	3 Y h a	b
1238	**2PBC J2327.3+1527**	BZUJ2327+1524	BZU	351.842	15.455	4.82	2.70	4.83	1.0 ± 0.7	0.5 ± 0.2	0.0460	43.67	1.60	1 N h b	
		SDSS J232709.30+153028.0	QSO				4.39				0.4600	45.77			
		BZQJ2327+1533	BZQ				6.70				0.9890	46.49			
1239	2PBC J2327.4+0939	PKS J2327+0940	BZQ	351.893	9.633	2.95	2.17	11.28	2.8 ± 1.7	0.57 ± 0.06	1.8430	47.51	1.75	3 Y h a	b F
1240	2PBC J2329.0+0329	NGC 7682	Sy2	352.203	3.483	4.11	4.87	6.31	1.3 ± 0.8	0.4 ± 0.1	0.0170	42.92	1.17	1 Y h a	
1241	2PBC J2331.0+7123	IGR J23308+7120	Sy2	352.697	71.381	3.99	2.68	6.64	0.8 ± 0.4	0.4 ± 0.1	0.0370	43.41	1.87	3 Y h a	I
1242	**2PBC J2333.9-2343**	BZUJ2333-2343	BZU	353.462	-23.730	3.79	0.97	7.25	1.3 ± 0.8	0.4 ± 0.1	0.0478	43.83	1.44	3 N h b	b
1243	**2PBC J2337.1+2150**	...	...	354.279	21.833	4.93	...	5.12	0.6 ± 0.3	0.3 ± 0.2	...	...	1.73	3 N h	
1244	**2PBC J2337.7+4309**	1RXS J233801.0+430852	X	354.449	43.160	4.73	2.50	4.99	0.4 ± 0.3	0.3 ± 0.2	...	...	1.54	2 N h b	b
1245	**2PBC J2340.1+0227**	...	...	355.027	2.465	4.64	...	5.15	0.6 ± 0.3	0.4 ± 0.2	...	...	1.04	1 N h	
1246	**2PBC J2341.0+7642**	...	...	355.256	76.709	4.75	...	4.96	0.5 ± 0.3	< 0.1	...	...	1.22	2 N h	
1247	2PBC J2341.9+3036	MCG+05-55-047	Sy2	355.476	30.593	2.91	0.71	11.56	2.0 ± 1.1	0.39 ± 0.06	0.0174	43.12	1.72	3 Y h a	
1248	**2PBC J2343.8+0539**	...	...	355.974	5.656	3.90	...	6.91	1.1 ± 0.7	0.4 ± 0.1	...	...	1.44	1 N h	
1249	**2PBC J2344.8-4245**	2MASX J23444387-4243124	Sy2	356.210	-42.756	4.53	2.50	5.36	0.9 ± 0.6	0.4 ± 0.1	0.5980	46.14	1.49	1 N h a	b
1250	**2PBC J2346.7-3837**	6dFGS gJ234643.9-383521	G	356.694	-38.620	4.96	1.90	5.07	0.5 ± 0.3	0.4 ± 0.2	0.0500	43.49	1.62	3 N h a	
		PBCX J234629.0-383405	X				4.45				...	...			

Table 2. continued.

	PBC name	ID	Type[a]	RA (deg)	Dec (deg)	Error radius (arcmin)	Offset (arcmin)	SNR	Flux[b] (erg cm^{-2} s^{-1})	Hardness ratio (R_{30-150}/R_{14-150})	Redshift	log L_{14-150}[c] (erg s^{-1})	Var	Flag 1[d] A B C D	Flag 2[e] I R F
1251	**2PBC J2348.9+4153**	...	...	357.239	41.893	5.04	...	4.95	0.4 ± 0.3	0.3 ± 0.2	...	...	1.58	2 N h	
1252	**2PBC J2351.8+3302**	4C 32.69	QSO	357.971	33.034	4.81	6.20	4.85	1.0 ± 0.6	0.5 ± 0.2	0.6590	46.13	1.12	1 N h b	
1253	2PBC J2351.7-0109	4C -01.61	Sy1	357.973	-1.166	3.30	0.96	9.23	1.5 ± 0.9	0.5 ± 0.1	0.1740	45.07	1.11	1 Y h a	b
1254	**2PBC J2353.7+7644**	...	...	358.438	76.734	4.80	...	4.87	0.7 ± 0.5	0.4 ± 0.2	...	...	1.71	1 N h	
1255	2PBC J2359.1-6055	2MASX J23590436-6054594	Sy2	359.748	-60.928	4.28	0.90	5.89	1.1 ± 0.6	0.34 ± 0.10	0.1014	44.47	1.54	3 Y h a	
1256	2PBC J2359.1-3035	H 2356-309	BZB	359.780	-30.595	3.49	1.96	8.36	1.4 ± 0.8	0.41 ± 0.08	0.1671	45.04	1.49	1 Y h a	b F

[a] The source type is coded according to the nomenclature used in SIMBAD, except for the blazars included in the Roma-BZCAT (Massaro et al. 2009), for which we adopted the relevant nomenclature.
[b] Flux is in units of 10^{-11}erg cm^{-2} s^{-1}.
[c] In case of more than one counterpart, the luminosity is calculated for each counterpart (where a redshift is available) assuming that it produces all the observed flux.
[d] Flag A: energy band with highest significance (1=15–150 keV; 2=15–30 keV; 3= 15–70 keV);
Flag B: "Y" if already reported as hard X-ray source;
Flag C: "l" if the source has $|b| < 5°$, "h" if the source has $|b| > 5°$;
Flag D: strategy used for the identification (see Sect.4).
e Flag I: "I" if source seen by INTEGRAL
Flag R: "b" if correlated with a ROSAT Bright source, "f" if correlated with a ROSAT Faint source;
Flag F: "F" if the counterpart is associated to a Fermi source; "?" if the BAT position is consistent with the Fermi position but the associate counterparts are different.